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This study was undertaken to provide a detailed look at the functions currently being performed by a small, liberal arts college library and to develop some recommendations concerning its future role. The major questions studied inthe report are (1) how satisfactory is the present library facility in supporting the information-related activities engaged in by members of the faculty and student body? and (2) if the library facility is not providing adequate support, what alternative solutions are feasible? Data on three components of the information system--the users, the library, and external sources--were collected by means of structured interviews, observation, published materials, and research reports and studies. The basic recommendation of the report is for a fundamental shift in the college library's role from an information storage facility to an information switching center. (CC)

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A SMALL COLLEGE INFORMATION SYSTEM: AN ANALYSIS AND RECOMMENDATIONS

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CHAPTER I

INTRODUCTION

Background

The role of the college library in higher education today is ambiguous and poorly defined. There are a number of alternative philosophies concerning what position the library should hold in the academic environment. These philosophies range from considering the library as the center or focal point of the educational system (i.e., the library college concept)[1] to viewing it as a place or location for storing informational materials which may be of some use to administrators, faculty, and students. These philosophies may be considered as the two extreme points on a continuum of roles ranging from an active to a passive involvement in the educational process.

Traditionally, small college libraries have concentrated the major portion of their energies and budget on the technical services aspect of their operations: the acquisition, processing and storage of informational material to be used by the faculty and student body. As a result of this emphasis, little systematic attention has been directed toward the public services aspect. That is, the services offered by the average college library to its user groups do not extend beyond simple reference guidance, interlibrary loan and photoduplication; for the most part, the search and retrieval functions are left to the user. There are several factors which have contributed to this situation. First, the less than enthusiastic attitude of university administrations towards the library has led to small operating budgets and lack of recognition for the professional staff. Operating under the assumption that the principal function of the library is to build an "adequate" collection, most of the available funds have been channeled to the activities of purchasing and processing materials. This has left only limited amounts of money for hiring professional staffs capable of effectively providing services to the user groups. Second, the typical administration and faculty have relatively low expectations regarding the functions performed by the library. As a result, very little pressure is placed on the library to extend the range and quality of its services. Third, librarians, until recently, have tended to perceive themselves as "builders" and "maintainers" of book collections rather than as members of a service or support organization.[2] This has led to a concentration on improving the efficiency of internal operations while all but ignoring the service functions of the library (i.e., the interaction between the librarian and the users).

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[1] Jordan, R. T. The library college: merging of library and classroom in Libraries and the College Climate of Learning. School of Library Science, Syracuse University, 1964, pp. 37-61.

If small college libraries continue to operate in this traditional mode and if they are not provided with more financial and attitudinal support from college administrations they are going to become less and less functional as time goes on. Each year there is an exponential increase in the amount of informational material being generated. With this increase in published material and with library budgets remaining relatively constant, a smaller and smaller proportion of the existing literature will be represented in the collection, and the faculty member and the student will have to resort to other means of obtaining information. Accompanying the information explosion is the trend towards specialization and diversification in the academic disciplines. As a result, more specialized material is being used at the undergraduate level than in the past. For example, scientific journal literature is now being introduced during the freshman and sophomore years. This trend implies that for the library to serve the information requirements of its users it must make available specialized as well as general informational materials.

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[2] Bundy, Mary Lee & Wasserman, P. Professionalism reconsidered. College & Research Libraries, 29(1), 1968.

In addition, the growth of the published literature increases the problems associated with searching for and retrieving those materials which best meet the information requirements represented by the population of users. Every year more information selection aids are brought into being and more sources of informational materials are established. If the library does not have the professional staff or the money to provide a search and retrieval service for its users, it will be left to the faculty members and students to search for, identify, and obtain the materials they need. The time and effort associated with this process will become more and more extensive as time goes on.

In summary, unless the concept of library operations is shifted from the more traditional approach of "collection building" to a more service-oriented approach and unless more financial support is provided by the administration, the college library of the future will become a non-functional entity. If the library essentially ceases to make a contribution to the educational process then the question arises as to what will take its place.

Purpose

The present study was undertaken to provide a detailed look at the functions currently being performed by a small, liberal-arts-college library and to develop some recommendations concerning the future role of this institution. Hamline University, St. Paul, Minnesota was used as a test case. It was felt that the information environment and problems associated with this school could be considered typical. Thus, recommendations for improvements at Hamline could potentially be applicable to small colleges generally.

The major questions addressed in this study are as follows:

- How satisfactory is the present library facility in supporting the information-related activities engaged in by members of the faculty and student body?
- If the library facility is not providing adequate support, what solution alternatives are feasible? Would internal modifications be sufficient or are major changes in the functions or tasks performed by the library called for? The identification of feasible solution alternatives must be guided by the constraints associated with the current environment and the performance standards established.

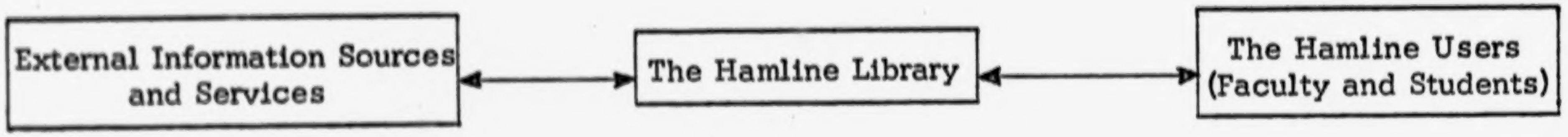
Method

A systems approach to problem specification and solution was initiated based on the descriptive model presented as Figure 1.

In this model the Hamline University Library is viewed as an organization of personnel, facilities, and procedures designed to serve the needs of the users and to draw upon the information resources of agencies and services external to the Hamline campus. The three major components of the descriptive model - Users, Library, and External Sources were specified in detail. Definition of user groups (Hamline

FIGURE 1

Descriptive Model: The Information Environment


External Information Sources and Services
The Hamline Library
The Hamline Users (Faculty and Students)

- Location: local, regional, national
- Content strengths in the collections
- Types of materials and services offered
- Costs
- Technological state-of-the-art

- Facilities
- Staff
- Collection characteristics
- Ordering patterns
- Services
- Procedures for ordering and processing materials
- Budget
- Technological state-of-the-art

- Professional activities
- Needed materials
- Needed material selection aids
- Procedures for obtaining needed/identified materials
- Size of faculty and student body
- Charges

faculty and students), their information-related activities, types of materials needed, selection aids used, and external resources drawn upon was obtained through structured interviews. Fifty-one faculty members (approximately 70% of the total) and 34 students were selected for interviews.

Descriptive elaboration of the Hamline Library was accomplished through interviews with the library staff and observation of book processing procedures, supplemented by enumerative studies of the collection and new acquisitions. Major areas of interest to this descriptive effort include: facilities and staffing, categorization of book and periodical collection by academic department, frequency of use of library services, and operations associated with ordering and processing new materials.

Description of external information sources and services derives from (1) interviews with head librarians, (2) material extracted from pamphlets published by various local, regional, national and federal information centers, and (3) research reports dealing with the general characteristics of information systems. Information collected from the first two sources listed above includes collection strengths, types of services offered, procedures required to obtain materials and services, and cost. The information gathered from the third source is concerned primarily with the technological state-of-the-art.

Principal Conclusion

Recommendations were made for the future of the Hamline Library based upon the elaborated systems model, assumptions of the future information explosion, increased scope and depth of user demand, and system criteria. The basic recommendation is for a fundamental shift in role of the college library from an information storage facility to an information switching center. Professional staff will worry less with processing books and more with interpreting and anticipating user needs, keeping abreast of external resources, and servicing the user by performing the linking function between his needs and the great wealth of material available in locations remote from the Hamline campus. Recommendations are also presented for more immediately implementable improvements to the present concept of operations, but the major force of the study is an imperative to pursue, through pilot study applications, the switching center concept as a way to keep viable the small, liberal arts college library of tomorrow.

CHAPTER II

THE INFORMATION ENVIRONMENT

This chapter provides a general description of the existing information environment at Hamline University: the library, the users, and local external information sources and services. The material presented is based on (1) the results of structured interviews conducted with the library staff and members of the faculty and student body and (2) informal observations of library operations. The summary tables of data which support this description are included in the appendices.

The Library

Facilities and Staff

The current library facility at Hamline University was constructed in 1907. In recent years the space in the library for storing materials has become saturated. As a result of this space shortage, four departmental libraries were created: biology, chemistry, physics, and music. These libraries house approximately 14% of the general collection. With the exception of the Music Library which employs student help on a part time basis, the departmental collections are unsupervised.

There are two large open study areas in the library and a few desks located in the stacks. Together these areas provide study space for approximately 28% of the student body. Although this limited space for student study does not present an acute problem, it does not allow for the projected increase in enrollment. Plans are currently being developed for a new library building which will include a large stack area, several seminar rooms, open study areas and carrels. This facility, however, will not be operational until early in the 1970s.

The library's staff consists of eight full-time employees; three professional librarians, two semi-professionals, one technician, and two clerks. The professional staff includes the head librarian, the director of technical services, and the reference librarian. The Acquisitions, Serials, and Cataloging Departments are staffed principally with technicians and clerks. In addition to the full-time staff, 6,000 student hours are utilized by the library each academic year.

The Collection

The current collection contains approximately 100,000 volumes. The distribution of the book portion of the collection with respect to the academic divisions is as follows: Social Sciences - 44.2%, Fine Arts and Humanities - 38.9%, and Natural Sciences - 11.5%. In the Natural Sciences collection the biology books represent 41% of the total. The History Department accounts for 41% of the books in the Social Science Division and the English Department holds over 50% of the books associated with the Fine Arts and Humanities Division. Both the History (13,312) and the English (14,412) Departments have more than twice as many books as any of the other departments. For a complete breakdown of the distribution of books by academic department see Table A-1, Appendix A. The periodical portion of the collection follows the same general pattern as the distribution of books. Fifty percent of the current periodical subscriptions are in content areas related to the Social Sciences, 24% in areas associated with Fine Arts and Humanities, and 10% in areas dealing with the Natural Sciences.[3] The three departments with the largest number of periodical subscriptions are Political Science (106), Education (75), and English (59), while the three departments with the fewest subscriptions are Mathematics (7), Physics (12), and Music (12). Table A-2, Appendix A provides a complete breakdown of periodicals by department.

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[3] Sixteen percent of current periodical subscriptions are categorized "general".

Procedures and Policies for Ordering Materials

The budget for purchasing new materials for the collection is divided between the library and the 18 academic departments by the head librarian. The amount of money allocated to each department is based on previous faculty ordering patterns (i.e., the departments that submit the most orders are given the largest proportion of the budget).

During the period covering July 1966 to December 1967 approximately 9,400 books were added to the general collection. Of these, 36% were requested by faculty, 55% were requested by the library staff, and 9% were donated as gifts. The departments with the highest acquisition rate were History (18%) and English (15%) while those that added the fewest materials were Chemistry (1.2%) and Speech and Theater (1.0%). Table A-4, Appendix A indicates the number of books acquired for each department and the source of the original order.

Services

The library has recently compiled a list of services which are available to faculty and members of the student body. Some examples of these services include (1) locating requested materials, (2) answering general reference questions, (3) preparing and circulating a New Book List every month, and (4) compiling bibliographies on selected subjects. (For a complete list of services, see Table A-6, Appendix A.)

Between October 1 and December 15, 1967, records were kept by the reference librarian concerning the number of questions asked at the reference desk each day and the content of these questions. During this time period, the mean number of reference questions asked per day was 11, with a range of from two to 41. Fifteen percent of the questions asked were faculty originated, the remaining 85% were asked by students. These questions were of six general types:

- Library policies, procedures, and facilities.
- Location of specific titles.
- Inclusion of specific titles in the collection.
- Specific factual inquiries.
- General guidance questions such as seeking assistance in compiling a bibliography or identifying titles in a specific subject area.
- Procedures associated with using the cooperative network (cooperative arrangements set up by seven small colleges in the Twin Cities).

Sixty-two percent of the faculty-originated questions were concerned with (1) determining whether a specific title was included in the collection or (2) gathering factual information. Approximately 31% of student inquiries were related to seeking general guidance. In addition, 25% of the students questions were concerned with obtaining assistance in locating a specific title in the collection. (For complete figures see Tables A-7 and A-8, Appendix A.)

The Hamline Library Users

Faculty

Hamline University currently has 18 academic departments. These departments are staffed with from two to eight faculty members. Fifty-one of the 71 full-time teaching faculty members were interviewed in the present study. The five general topic areas explored in these interviews are as follows:

- Professional activities requiring the identification and use of informational materials.
- Types of informational materials needed to perform the professional activities.
- The material selection aids (e.g., abstracts, indexes, etc.) used to identify needed materials.
- The location of desired materials and the procedures used to obtain these materials.
- The size and content composition of personal collections.
- The adequacy of the Hamline Library in terms of its policies, its collection, and its service.

The three general categories of professional activity include:

- Instructional activities: preparation for courses, giving lectures, directing seminars, and supervising students involved in individual research projects.
- Personal professional growth activities: conducting research projects, writing or presenting papers, consulting.
- Administrative activities: committee assignments, counseling, departmental meetings, etc.

Overall, the instructional activities require the largest proportion of time (74%) followed by personal professional growth requiring 17% and administrative growth activities requiring nine percent.

A wide range of informational materials were identified by faculty members as being required (currently used) in the performance of their professional activities. These materials include textbooks, reference books, biographies, conference reports, pamphlets, periodicals, programmed instruction texts, and psychological and achievement tests. (A complete list of the 51 types of material identified can be found in Table B-2, Appendix B.) Almost twice as many informational materials were identified by faculty members interviewed in the Fine Arts and Humanities Division (39 types) than by faculty representing the Natural Sciences Division (22 types), and the Social Sciences Division (20 types).

Thirty-five material selection aids were mentioned in the interviews. Those aids used by 1/3 or more of the faculty members include (1) journal tables of contents (65%), (2) book reviews in professional journals (54%), (3) journal article citations (50%), (4) book advertisements from publishers (50%), (5) discussions with colleagues (35%), and (6) abstracting journals (33%). For a complete listing see Table B-3, Appendix B.

All of the faculty members interviewed found it necessary to use information sources external to Hamline University in order to satisfy their needs for materials and services. Overall, 17 sources were mentioned. Many of these sources are in the Twin Cities, however, some are located in other areas of the country. The two most frequently used sources are professional meetings and the University of Minnesota Library. Several faculty members have built up sizeable personal collections of books and journal subscriptions. In a sense these collections reduce the demand on the central collection by providing an additional source of informational materials for professors and students to draw upon.[4] The maintenance, updating, and expansion of these collections, however, constitutes a substantial personal expense.

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[4] Most faculty members indicated that they were willing to make materials in their collections available to colleagues and selected students.

Students

Thirty-four students representing the 18 academic departments were interviewed. Of these 34 students, 16 were engaged in independent study and senior honors projects and 18 were pursuing a standard course of study.

The students working on independent study projects use a much wider range of material selection aids than the regular students. (See Table B-5, Appendix B.) The regular student who is working on a term paper relies primarily on the Hamline University Library card catalog and the Readers Guide to identify and select relevant material while the independent study student uses several additional sources including principally abstract journals, special bibliographies, and journal article citations.

Both groups of students interviewed indicated the requirement to use a number of libraries in the Twin Cities to satisfy their needs for informational materials. In addition to using local information sources, many of the students engaged in independent study found it necessary to write to or visit libraries in other parts of the country.

Local External Information Sources and Services

In the Twin Cities area there are three major types of information sources: libraries associated with other colleges and universities, public and state libraries, and industrial libraries (e.g., 3M, Minneapolis Honeywell, etc.). With the exception of the libraries associated with local industries which offer many personalized services, such as selective dissemination of information, translations, special literature searches, etc., the libraries in the area are confined to providing such standard services as reference help over the phone, interlibrary loan, and photoduplication.

The Hamline University Library has recently entered into a cooperative program with six other small, liberal arts college libraries: Macalester, Bethel, St. Thomas, St. Catherine, Concordia, and Augsburg. As part of this cooperative effort, each of the seven libraries has agreed to be responsible for ordering books listed in Choice[5] magazine in the content areas allocated to them. This procedure should eventually lead to a situation where more books in each subject area are readily available to students and faculty. Books that are held by each of these schools can currently be checked out by students from any of the seven participating colleges. In addition, a quick delivery service (within the same day) has been planned to facilitate interlibrary loan. Plans are currently under way to develop a Union List of Periodicals based on the holdings of these seven libraries plus the collection of the James Jerome Hill Reference Library. This list will facilitate the procedures associated with locating requested periodicals.

A general list of the information sources and services identified in the present study can be found in Appendix C.

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[5] Publication which presents book reviews and makes recommendations concerning the books that should be purchased by college and university libraries.

CHAPTER III

OPERATIONAL PROBLEMS AND INTERIM SOLUTIONS

Introduction

The principal objective of the library is to support the information-related activities of faculty members and students. This chapter focuses on the inadequacies associated with the current policies and physical facilities of the Hamline Library with respect to meeting this objective. In discussing each problem area, consideration is given to possible ways of modifying or improving the existing system to better serve the needs of the faculty and students.

Operational Problems

Results of student and faculty interviews include the identification of problems associated with the present information environment. These problems are as follows:

1. Organization of materials:
   - The organization of materials in the library makes browsing and locating materials difficult. This is particularly true for current periodicals which are arranged on the shelves alphabetically by title.
2. Departmental libraries:
   - Faculty members and students with interdisciplinary information requirements may have to go to several locations in order to obtain desired informational materials.
   - Current procedures regarding the management of the collections in departmental libraries has led to inadequate maintenance and updating. Of the four departmental libraries, only one is supervised and that is accomplished by using part-time student assistants. In addition, the availability of materials

from these libraries to students is severely limited as the libraries are closed evenings and weekends.

3. Book budgets and ordering procedures:

   - Many faculty members feel that they would like a more active role in ordering books for the collection. Further, many expressed a concern for gaining a better understanding of the criteria involved in determining the size of the book budget to be allocated to the various academic departments.
   - Faculty members for the most part, appear to be unaware of when books they have requested for course preparation or class assignment are ordered and received by the library.
   - Current library procedures for ordering special materials (music scripts, out-of-print books, etc.) either fail to locate the requested materials or require a substantial length of time.

4. Circulation policies:

   - The current circulation policy of the library coupled with the policy of holding only one copy of a given title in the collection makes it difficult for students to gain exposure to appropriate materials. The circulation policy allows a student to check materials out of the library for an entire term (eleven weeks). There is a recall procedure if the materials are requested by other students; however, this is generally ineffective.
   - Reference books cannot be taken out of the central library. This makes it difficult for students to use information contained in these materials in the laboratory or other locations remote from the library.

5. Awareness of services:

   - The faculty and students appear to be generally unaware of current library holdings and services and of how best to make use of these facilities and services.

6. Physical plant:

- Students find it difficult to work effectively in the library because it is crowded, noisy, and poorly ventilated.

Examination of Alternative Solutions for Each Problem Identified

1. Organization of material in the library. Both the faculty and members of the student body have indicated that it is difficult to locate books in the library unless they have specific references in mind. Over 30% of the questions asked of the reference librarian were concerned with determining whether a particular book was included in the collection or with seeking assistance in locating specified titles. This is in part due to the fact that the Library of Congress system of cataloging books does not provide adequate content categories or the depth of indexing required for specialized areas of inquiry. Modification of the catalog with respect to the use of the Library of Congress system, however, does not appear to be feasible for the following reasons:

- Over 100,000 titles have already been cataloged using the Library of Congress system. An extensive amount of time and manpower would be required to modify this cataloging or to recatalog based on a different set of classification concepts.
- At the present time, there is no replacement for this system that would insure adequate pay-off for the expenditure in time, talent, and money. That is, there is no indexing or cataloging system which adequately fulfills or matches the key words or search strategies used by a variety of different users with a wide range of backgrounds and orientations.
- To change to a system in which the cataloging information was not already completely provided would increase the professional staffing requirements for the library's technical services. At the present time all the cataloging is accomplished by clerks.

Thus, there are no present, reasonable alternatives to the existing organization of books in the library.[6] Periodicals received by the Hamline Library, however, are generally not cataloged by the Library of Congress system. Currently they are arranged on the shelves in alphabetical order. This organization makes locating or browsing for materials difficult for the student who is probably not aware of all the journals or periodicals in his major field of interest. It should be possible to reorganize these periodicals or at least to list them in such a way as to increase the probability that the student will encounter or be exposed to the pertinent literature in his field of study. For example, periodicals could be arranged on the library shelves by discipline or by department. Another possibility is to list current subscriptions by discipline or department in a separate subject catalog without changing the shelving arrangement.

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[6] When the new library facility is constructed it may be possible to organize the books by academic division: Fine Arts, Humanities, Social Sciences, Natural Sciences.

2. Departmental libraries or centralization vs. decentralization of informational materials. The departmental libraries were originally created for two reasons, insufficient shelf space in the central library to house the entire collection and faculty and student requirements to have laboratory-related information immediately accessible. As mentioned earlier, there are a number of problems associated with splitting up the collection. First, it may make it necessary for students and members of the faculty to go to several locations in order to obtain the material they need. This is particularly true when assignments or projects are of an interdisciplinary nature. Second, there is currently little or no supervision of the departmental collections. This has resulted in disorganization and some loss of materials. Third, because these libraries are not open weekends or evenings, the material has a limited availability to students.

Considering the constraints imposed by an insufficient number of library personnel and the current lack of space in the central library, it is hard to see alternatives to the existing situation. However, given the possibility that in the future more staff may be made available or that some part of the current staff could be used, one alternative would be to provide full-time supervision of these collections and extend the hours to cover evenings and weekends. This alternative requires that somebody be in each of the four departmental libraries from eight in the morning until eleven at night. In order to implement this alternative, the current staff would have to be increased by approximately eight people. (This would substantially increase the current budget for salaries.) The question is, do the benefits gained by providing this staff outweigh the cost? This solution essentially makes the collections in the departmental libraries as available to students as the collection in the main library, however, it does not alleviate the problem of the user with interdisciplinary needs-- he may still have to go to more than one location on campus to obtain the required materials. It would seem then that the limited benefits obtained do not warrant the likely cost associated with this alternative.

A second alternative is to provide a means for centralizing the entire collection except for reference materials needed specifically for laboratory work (in music or theater these materials would be in the form of scripts or scores). Hamline University has plans for building a new library facility which will provide sufficient space to store all of the books and periodicals. One disadvantage of centralizing materials is that the books in the various disciplines or subject areas are to some extent intermingled. Having all the materials in one content area together makes it easier for students to be aware of what is available. It may be possible, however, in the new facility to organize the materials by the academic divisions with separate card catalogs for each: Fine Arts, Humanities, Social Sciences, and Natural Sciences. This organization would direct students to specific areas of the library when their needs were specific while at the same time the entire collection would be centrally available to the student or faculty member with interdisciplinary informational requirements.

3. Book budgets and book ordering procedures. The relative size of the book budget allocated to each of the 18 academic departments is primarily determined by previous ordering rates. That is, if a department orders a large number of books and/or exceeds the allocated budget, it is awarded a larger percentage of the available funds the following year. On the other hand, if a department orders only a few books and/or does not use its entire budget it is penalized the following year by receiving a smaller proportion of the money. The budget then is responsive primarily to faculty ordering patterns. These patterns may or may not reflect adequacies and inadequacies in the general collection. An analysis of the adequacy of the collection might provide a better basis on which to determine an appropriate distribution of funds.

In order to make some estimates concerning the adequacy of the Hamline collection, a comparison was made between a sample of materials listed in Books for College Libraries[7] and the books currently held in the Hamline library. This was accomplished by selecting a sample of the books listed in Books for College Libraries and determining whether these books were included in the Hamline collection. These comparisons were made in the following content areas: history, English, natural science, social science, language, music and germanic philosophy. The degree of match between the collection and the sample ranges from eight percent for Germanic Literature to 43% for mathematics. (See Table A-3, Appendix A.)

Consideration should also be given to how the library can most effectively utilize its proportion of the book budget. Currently, the ordering pattern of the library appears to correspond with that of the faculty (Table A-4, Appendix A). One alternative would be to have the library order books in content areas not covered by current faculty orders. This would provide a step toward insuring a well-balanced, stable collection; one that is not only responsive to current information needs, but to possible future requirements as well. In a small college like Hamline the turn-over in faculty is sufficiently frequent that purchasing only for current needs leads to an unsystematic collection with large gaps and small pockets of highly specialized information. It is difficult to determine at the present time whether supplementary ordering can be effectively accomplished by the current library staff. It may be that subject/content specialists are necessary.

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[7] Books for College Libraries is a list of books recommended for undergraduate libraries.

The major concerns of the faculty with respect to book ordering policies and procedures are as follows:

- The extent to which they actively participate in book selection.
- The inadequacy of the current feedback system concerning when selected books are ordered and when they are received.
- The length of time required to process acquired materials through the library is sufficiently long that materials must be ordered far in advance of when they are actually needed for course work.

The extent to which each faculty member participates in and/or has an impact on the book selection process is generally a function of the policy established by the department chairman. In some departments each faculty member is given a proportion of the budget and sends his orders directly to the library, in other departments all orders go to the chairman for approval before being sent to the library. It should be mentioned that the library actively encourages faculty members to participate as much as possible in selecting books. At the present time, faculty orders represent approximately 36% of the books purchased for the collection.

The current feedback system is based on circulating to all faculty members the New Book List which is compiled once a month. This list, which is organized by subject fields, contains all books that have been cataloged during that month. There are two major disadvantages of this list as the sole means of providing the faculty member with information concerning books he has requested for the collection. First, he must remember what he has ordered in the last two, three, or four months, and then search the entire list to see if these items have been received. Second, he is not informed when the book is actually received, but rather when it has completed the processing sequence. As a result, the faculty member is generally not aware of when books he has selected are received and in many cases he has forgotten what he ordered by the time he is notified that the book is in the library and ready for use. Finally, he is not using the books that he has ordered for his course preparation or his research because he does not know that these books are available. This lack of awareness on the part of the faculty is supported by the fact that 13% of the book purchase requests made by faculty members over a six-month period were for books already on order or in the library collection. Eight of the 18 departments had more than 15% of their requests rejected for this reason (Table A-5, Appendix A). This problem could be alleviated by sending individual notices to each faculty member first to inform him that the book has been ordered and second that the book has been received by the library. The notice would also provide the faculty member with a permanent record for his files. In order to implement this action some additional processing steps will have to be performed in the acquisitions department of the library, however, once the procedures are set up these steps should not require a significant increase in time.

4. Circulation policies. The current circulation policy for books in the general collection (stack books) allows students and faculty members to check books out of the library for an entire term. If books that have been checked out are requested by other faculty and students these books are recalled by the library; generally the recall procedure has proved to be ineffective. This situation coupled with the fact that the library has a policy of not acquiring multiple copies of books makes it difficulty for students to gain exposure to the appropriate materials. What usually happens is that the first student who gets to the library after the assignment is made checks out most of the material. There are three alternatives to the current policy which would increase the general availability of materials:

- Check books out for a shorter period of time (e.g., two weeks).
- Order multiple copies of books which are needed by several students.
- Put all books on reserve that are needed by more than a few students.

The first alternative mentioned above is probably the most satisfactory. Although the implementation of this alternative will increase shelving and filing requirements, it will not cost the library a significant additional expenditure of man hours over the current procedure, and it should insure that the library materials will be available to a greater number of students and faculty. The second alternative is rejected for the present time because of the cost associated with the purchase of additional copies. Given the limited budget, this money can be put to better use in purchasing new materials for the library. The third alternative, that of using the Reserve System, would insure that the materials were available to anyone who needed them. However, reserve books can only be used for a restricted period of time which may be too limiting for students using the materials for projects or term papers.

The policy of not allowing reference books to circulate poses a problem when a student needs to use information contained in these books outside the library (e.g., data tables needed in statistics laboratory). When reference materials are needed in the laboratory as a source for doing the work, it would seem that these materials should be available in the laboratory; either the books themselves or photocopies. If photocopies are used, they should be provided by the library.

5. Lack of awareness on the part of faculty and students concerning the services provided by the library. The library has recently compiled a list of the information services which are available to members of the faculty and student body (Appendix A). These services range from obtaining requested materials on interlibrary loan to providing bibliographies on various subjects. Although this list has been circulated to all the academic departments, there is very little evidence from the interviews conducted that either the faculty or the students are aware of most of the services offered or have made any significant attempts to use these services. The results of the interviews indicate that the faculty and students use the interlibrary loan service to a limited extent, although many of them expressed the feeling that it was more trouble than it was worth (see Comments, Appendix B). It is of interest to note that only two of the 34 students in the interview sample had ever made use of the reference services provided by the library. Results of a study conducted in the library concerning the frequency and type of requests made of the reference librarian shows that approximately 11 questions are being asked each day. These questions are generally of six types:

- Library policies, procedures, and facilities.
- Location of specific titles.
- Inclusion of specific titles in the collection.

- Specific factual inquiries.
- General guidance questions such as seeking assistance in compiling a bibliography or identifying titles in a specific subject area.
- Procedures associated with making use of the cooperative network (e.g., the cooperative program set up between the seven small colleges).

There is little indication that the bibliographic services offered by the library are used by the faculty. Most faculty questions in the sample analyzed were concerned with obtaining facts or determining whether a title was held by the library (see Appendix A).

It is apparent that if the librarian wants the faculty to make use of the range of available services he and his staff must market them, just indicating that certain services are available is not a sufficient stimulus for getting the faculty to use the services. This is, in part, due to the low expectations of faculty concerning the adequacy with which bibliographic services could be accomplished by the library. In order to overcome this attitude, which may or may not be well founded, it would be necessary for the library staff to demonstrate to the faculty that this is not the case; e.g., bibliographies relating to various subject fields could be compiled on a trial basis and presented to selected faculty for review and evaluation.

6. Physical plant. Most of the faculty and students interviewed felt that the physical conditions of the current library facility were not conducive to effective work. The large open study areas are generally overcrowded and noisy. In addition, the long study table, the hard chairs, and the poor lighting create a relatively uncomfortable work environment.

Several suggestions were made in the course of the interviews concerning the physical characteristics of the future library building. These suggestions include:

- Provide a variety of seating arrangements: study cubicles or carrels, integrate study areas with the stacks, etc.
- Provide seminar rooms for students who wish to discuss library materials they are using.
- Provide some comfortable chairs for reading. This is particularly important in the periodical room.
- Install sound proofing and carpets to cut down the noise.

Impact of Suggested Modifications

As stated earlier, the primary objective or purpose of the library is to support the instructional activities of the college. In order to adequately achieve this objective, the library must be geared to provide the faculty and the student body with the informational materials that they need--when they need them.

The suggested modifications discussed in this chapter improve support in two general ways:

- Increasing the accessibility and availability of materials currently held in the library collection.
  - Recentralizing the collection when the new library is constructed.
  - Organizing books by academic division and periodicals by subject area.
  - Revising the circulation policy.
- Improving communications between the library and the faculty.
  - Spelling out procedures/criteria for allocating book budgets to departments.
  - Providing adequate feedback to faculty members concerning the books they have ordered (i.e., if they are ordered and when they are received).
  - Marketing existing library services.

These modifications contribute in only a limited way to meeting the objective of providing adequate informational support to the faculty and the student body. The pool of information materials that is currently available at Hamline University is not adequate. Both students and faculty have evaluated the collection as being weak in most subject areas. This point is supported by the results of the study conducted in the library which indicated that the collection contains approximately 30-40% of the titles recommended for college libraries. Thus, any bibliographic or search services based on this collection of materials will undoubtedly be incomplete.

Most of the searching for and retrieving of informational materials must be accomplished by the student or the faculty member. Since many of the necessary materials are not available in the library it becomes necessary to use other information sources external to the university. Thus, the faculty member and the student must spend a sizeable amount of time identifying potential sources of information and locating materials. Since the information sources and services associated with each discipline are continually changing and new services are being offered each year, a significant amount of effort is required on the part of the user to keep informed about what is available at a given point in time and what interfacing procedures are required. The time and energy expended in performing these activities should be allocated to satisfying the more professional and creative tasks associated with teaching and doing research.

It is clear from this discussion that in order for the library to support the informational requirements of the college, it must go beyond attempts at increasing the efficiency of its internal operation, it must increase the information resources from which it draws and expand the type and range of services it can actually provide to its users. Some notions of how these functions might be accomplished are presented in the next chapter.

CHAPTER IV

LONG RANGE RECOMMENDATIONS

Introduction

In order to provide adequate informational support for the present and future instructional program at Hamline University, the library will have to expand its informational base. Currently, both faculty and students find it necessary to use information sources external to the Hamline Campus to satisfy their requirements for materials and services. Thus, a substantial amount of time is spent going to other information centers and libraries to select and review materials. During the interviews held with faculty members, 17 sources of information outside the university were identified as being useful. Students engaged in independent study and honors projects also indicated a need to use several information sources in addition to the Hamline Library. With the trend toward increasing the number of independent study projects, more and more students are going to require informational resources which are not included in the Hamline collection.[8]

As time goes on, the problems associated with identifying and obtaining relevant materials and services is going to increase. Every year there is an exponential growth in the amount of informational material being generated. Accompanying this "information explosion" is the trend toward specialization and diversification in the academic disciplines. It should be up to the library, not the user,to interact with this body of information and to select and retrieve from it those materials and services needed to meet the range of information requirements represented on the campus.

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[8] Projected curriculum changes at Hamline include placing greater emphasis on the independent study program.

Increasing the Informational Base

Collection Building

One approach to expanding the informational base of the library is to substantially increase or build-up the permanent collection; that is, make the library responsible for acquiring, processing, and storing all the materials that are currently required or might possibly be required in the future. This approach is rejected because it does not meet the following criteria:

- Acquisition and operating costs: the cost associated with the purchase of materials would require a far larger budget than appears to be probable in the near future.
- Growth potential or adaptability to structural characteristics: the current and planned for library facilities do not provide enough storage space for all the materials that would have to be acquired.
- Marketability or applicability of acquired materials to a wide range of information needs: the rate of turn-over in the faculty and student body places additional purchasing requirements on the library. Over 40% of the faculty has been at Hamline for less than four years. As the composition of the faculty shifts,the requirements for information change. In order to provide needed information, the library will have to purchase large numbers of informational materials in highly specialized areas. When faculty members leave, the library may be faced with the problem of storing a substantial amount of material which is of little or no value to its other users.

The Library as a Clearinghouse

The library could expand its base of informational resources by operating as a clearinghouse or switching center for materials and services. As a clearinghouse, the library obtains the needed materials and services from other libraries or information centers and disseminates these materials to the faculty and students. These materials could be of several types; some examples include specialized books or sections of books, photocopies of journal articles, technical reports, pamphlets, abstracting bulletins, tables of contents of selected journals and specialized bibliographies.

There are three major advantages associated with having the library function as a clearinghouse. First, it enables the library to have a large pool of informational materials available to it without having the processing and storage requirements associated with acquiring information for the permanent collection. That is, the library can selectively tap available information sources as dictated by requirements and forward the received material directly to the appropriate faculty member or student. Second, by dealing with information sources and services which are based on large, comprehensive collections of material, the library can make available information search services and current awareness services which it could not otherwise provide without significantly increasing its own information resources and acquiring the necessary personnel and equipment (e.g., most of the current awareness services are computer based). Third, since the needs for specialized and in depth material can be satisfied through the clearinghouse, the book budget can be directed towards purchasing only those materials that are needed by undergraduate students in completing their course requirements; that is, the budget can be concentrated on developing a good "core" collection rather than also attempting to meet specialized requirements associated with independent study and research projects.

Considering the library as an information clearinghouse represents a significant shift from traditional operations. The library rather than the user is made responsible for identifying sources of informational materials and services and for compiling bibliographies and conducting literature searches to meet the stated requirements. Thus, the task of the librarian is to translate the information requirements of faculty and students into sets of relevant informational materials. In order to adequately perform this translation, the librarian must work directly with the faculty members and students to insure an adequate articulation of their information requirements. Figure 2 provides a preliminary diagram of the interactive relationship between the library-clearinghouse and its users.

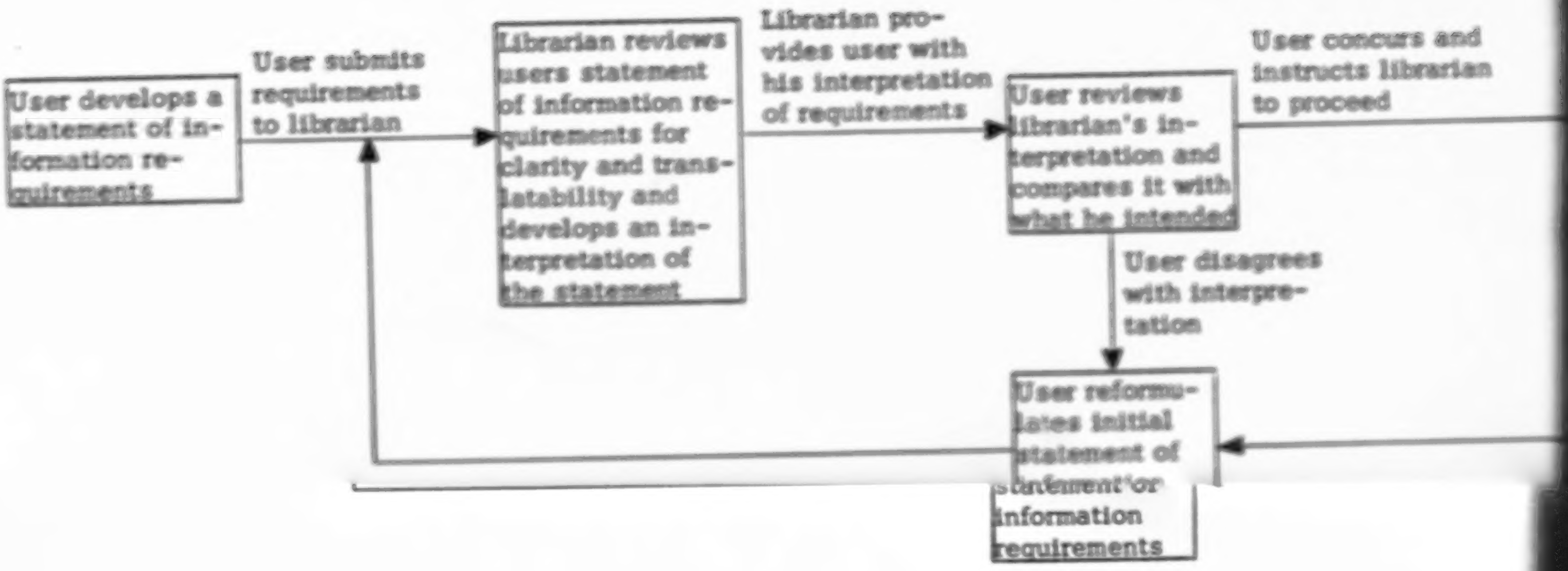
External Information Resources of Potential Use to the Clearinghouse

There are several information resources upon which the library can draw to obtain materials. These resources can be categorized in a number of ways; however, for purposes of this discussion they will be classified under two major headings: institutions which are similar or comparable in size and/or function to the Hamline Library and institutions which are dissimilar in purpose or function to the Hamline Library (Figure 3).

Like or similar institutions include libraries located in other colleges or universities. Cooperative programs or networks can be set up between these like institutions such that (1) they provide each other with materials contained in their respective collections

FIGURE 2

INTERACTIVE RELATIONSHIP BETWEEN LIBRARY AND USER


User develops a statement of information requirements
User submits requirements to librarian
Librarian reviews users statement of information requirements for clarity and translatability and develops an interpretation of the statement
Librarian provides user with his interpretation of requirements
User reviews librarian's interpretation and compares it with what he intended
User concurs and instructs librarian to proceed
User disagrees with interpretation
User reformulates initial statement of
statement of information requirements

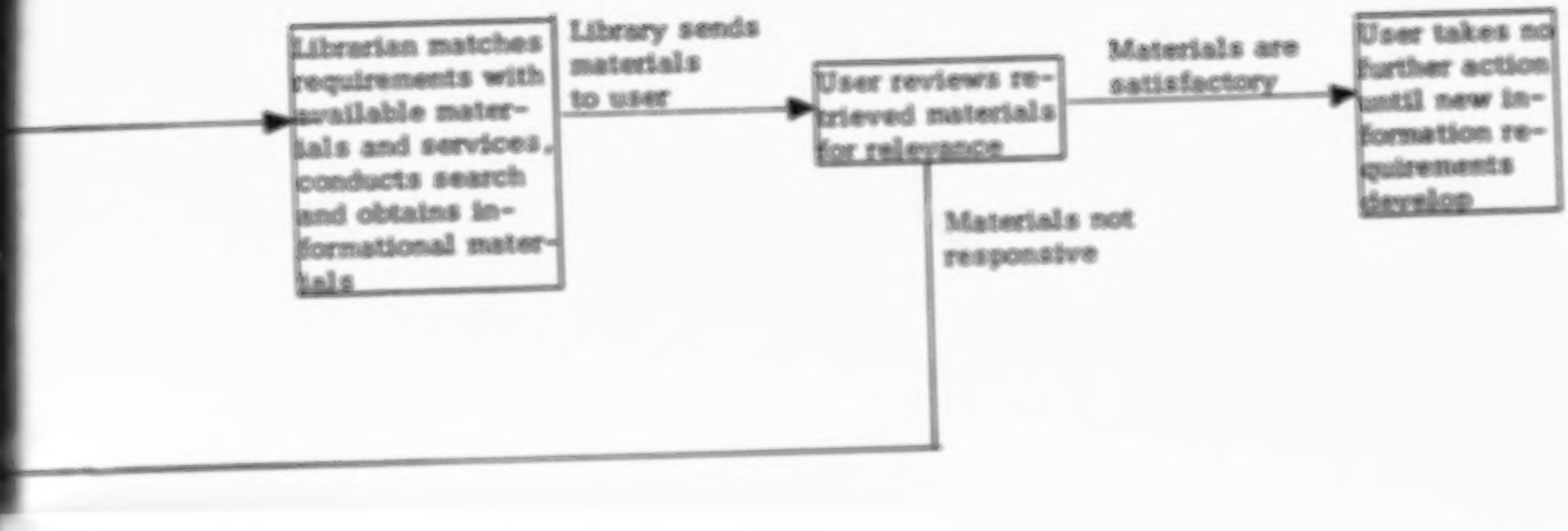
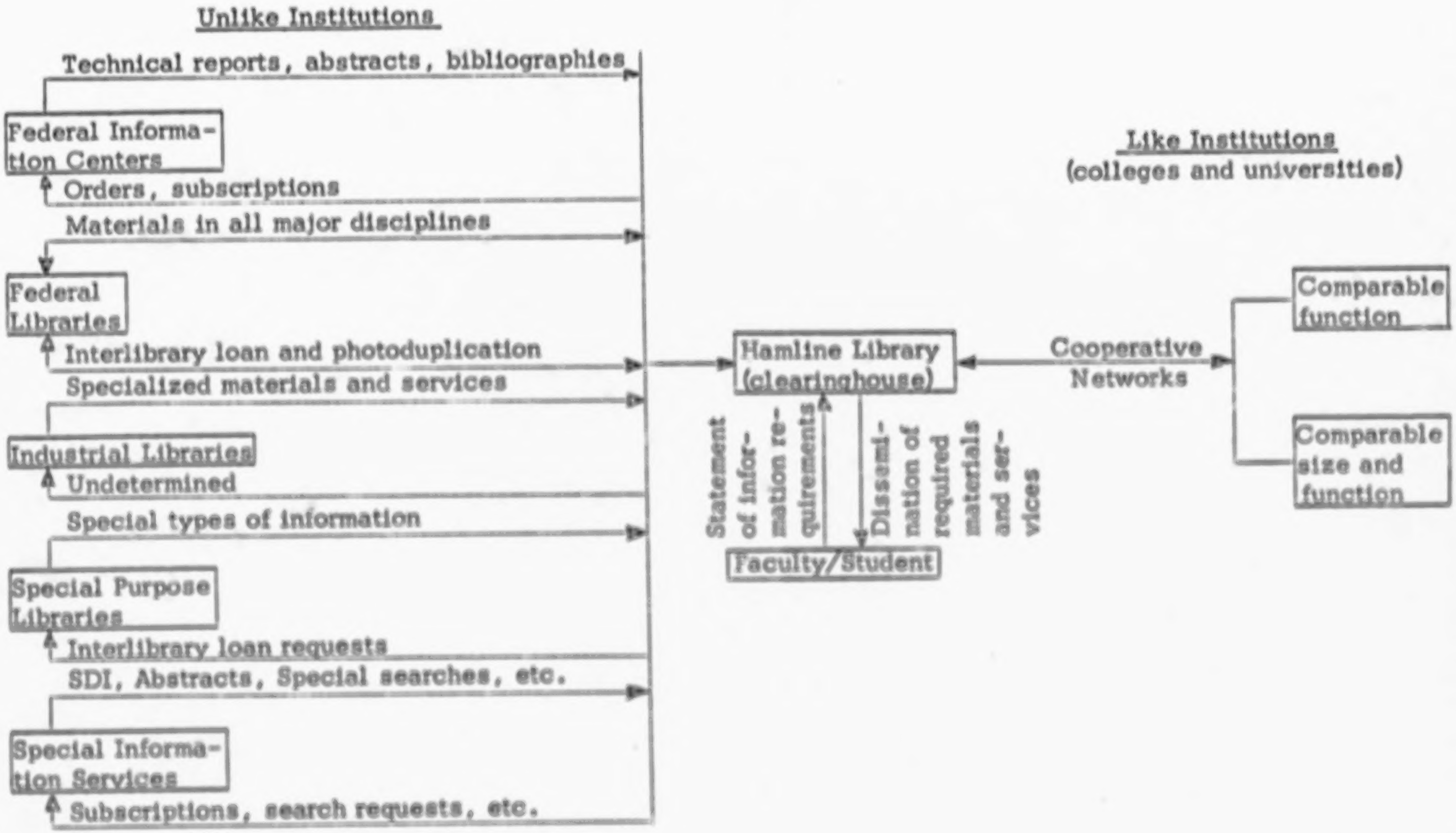

Librarian matches requirements with available materials and services, conducts search and obtains informational materials
Library sends materials to user
User reviews retrieved materials for relevance
Materials are satisfactory
User takes no further action until new information requirements develop
Materials not responsive

FIGURE 2

INTERACTIVE RELATIONSHIP BETWEEN LIBRARY AND USER

FIGURE 3

Classes of Information Resources


Unlike Institutions
Technical reports, abstracts, bibliographies
Federal Information Centers
Orders, subscriptions
Materials in all major disciplines
Federal Libraries
Interlibrary loan and photoduplication
Specialized materials and services
Industrial Libraries
Undetermined
Special types of information
Special Purpose Libraries
Interlibrary loan requests
SDI, Abstracts, Special searches, etc.
Special Information Services
Subscriptions, search requests, etc.
Hamline Library (clearinghouse)
Statement of information requirements
Dissemination of required materials and services
Faculty/Student
Cooperative Networks
Like Institutions
(colleges and universities)
Comparable function
Comparable size and function

through interlibrary loan procedures, (2) they provide pick-up and delivery services (if situated locally) for loaned/borrowed material rather than sending the material through the mail, (3) they duplicate material at no cost to one another, and (4) they attempt to build their collections in different content areas to cut down on duplication and increase the likelihood that the required material will be available somewhere in the network.

Hamline University is currently participating in a cooperative program composed of seven small, liberal arts colleges in the Twin Cities. This type of cooperative program, however, may not be able to meet the range of requirements for information. First, the types of libraries in the network do not provide any specialized services; that is, they are not currently equipped to translate foreign documents/books, to conduct literature searches and compile bibliographies or to provide current awareness services such as Selective Dissemination of Information (SDI). One reason these services are not provided is because they are expensive to perform and most library budgets are too small to absorb the costs. Second, small college libraries generally acquire the same types of material; they attempt to build a well-balanced collection of books and periodicals. There is no systematic acquisition within the network of such materials as (1) technical report literature, (2) U.S. government, United Nations, and foreign government publications, or (3) patents.

Institutions which are dissimilar or differ from the Hamline Library in size and character can be divided into five general classes. These classes will be characterized with respect to the content and form of the informational materials which are made available, the types of services which are offered, and the procedures required for tapping these resources.

1. Federal Information Centers such as the Clearinghouse for Federal Scientific and Technical Information and the Defense Documentation Center (DDC). These centers contain copies of all scientific and technical reports prepared by or for federal government agencies - some of these reports are submitted by academic institutions; some by private institutes, research-oriented companies, or large industrial organizations; and some by the federal agencies themselves. Abstracts of these reports are prepared and circulated monthly to subscribers in U.S. Government Research and Development Reports. All documents held by these federal centers can be obtained in either hard copy (photo-duplicate) or microform. In addition, literature searches based on key words submitted by a requester will be performed and associated bibliographies prepared.

2. Federal libraries such as the Library of Congress, the National Agriculture Library and the National Library of Medicine. Taken together, these libraries should have most of the important books and periodicals in all of the major disciplines. The materials held in these collections are available through interlibrary loan or photoduplication. Other services offered include literature searches and limited translations at a cost to the requester. In addition, the MEDLARS System at the National Library of Medicine prepares recurrent bibliographics in specialized areas and compiles and circulates Index Medicus.

3. Industrial libraries. Large, industrial organizations generally have a number of highly specialized collections composed of books, journals, technical reports, and patents. In some instances, materials in these collections are directly available to the public; in other cases, selected materials can be obtained through interlibrary loan or photoduplication. As part of the present effort,an attempt was made to develop a general list of the types of library services engaged in by some of the

major industries located in the Twin Cities (e.g., Honeywell, 3M, etc.). These services include general reference information (e.g., answer to a specific question--fact retrieval) translations, literature searches and compilation of bibliographies in requested areas, and selective dissemination of current information. It should be mentioned that most services offered are currently only available to employees. There is reason to believe, however, that Hamline could obtain cooperation from these industrial libraries: first, because the major industries are represented on the Hamline Board of Trustees and second, because Hamline is a source of potential talent for these industries. The extent to which cooperation is possible will have to be determined through discussions with the local organizations and their library staffs.

4. Special purpose libraries such as Center for Research Libraries, John Crerar, and University Microfilms. These libraries or information centers have special types of collections which are put together for specific purposes. For example, University Microfilms makes available in microfilm or photocopy all doctoral dissertations, over 20,000 modern out-of-print titles, and 3,000 current and backfile periodicals. In addition, University Microfilms publishes Dissertation Abstracts which it sends to subscribers monthly. The John Crerar Library is a reference library devoted to research literature in science, technology and medicine. In addition to normal reference assistance and interlibrary loan, this library provides a photoduplication service and a research information service (prepares definitive reports, comprehensive bibliographies, and abstracts). The Center for Research Libraries acquires and makes available through interlibrary loan and photoduplication infrequently-used research materials (e.g., doctoral dissertations from foreign countries, scholarly periodicals from foreign countries, U S. college catalogs, etc.).

5. Special information services such as those offered by the professional societies or commercial organizations, e.g., the Institute for Scientific Information. The professional scientific societies publish abstracts and indexes covering most of the journal literature in their respective disciplines, perform literature searches on request, compile special bibliographies, etc. In addition, many of the societies currently provide or have plans for providing SDI type services based on interest profiles or key words supplied by users. None of these services are free; however, they are available at a reduced cost to society members. The Institute for Scientific Information provides a number of computer-based services to its subscribers. These include (a) Current Contents in chemistry and life sciences (the tables of contents of a significant portion of the journal literature in these areas), (b) Science Citation Index, (c) Index Chemicus, (d) literature searches based on special request, and (e) Automatic Subject Citation Alert.

The Clearinghouse and Its Users

Delineation of Users Information Requirements

In order to determine the specific tasks of the library with respect to the collection and dissemination of informational materials and services, it will be necessary to develop a detailed description of the information-related activities associated with the educational and research process. There are several activities which generate requirements for informational materials. Some examples of these activities include: (1) course preparation, (2) selecting reading assignments for students, (3) independent study and honors projects, (4) research projects engaged in by faculty members, and (5) administrative and committee assignments. The range of requirements resulting from these activities should serve as a basis for determining what materials and services should be provided by the library.

For purposes of illustration, the following discussion presents a tentative analysis of the sequence of activities which might be undertaken by a faculty member in preparing for and teaching a given course.

1. Develop a preliminary outline of the course. This outline would include a general description of the content areas to be presented during the term as well as some notions concerning alternative methods or approaches for presenting various aspects of the content. In adidition, the outline might provide a preliminary plan for determining the sequence in which various topics will be presented and an approximate time schedule (i.e., what topics will be discussed during the first two weeks, second two weeks, etc.)

2. Select a textbook(s) to be used in the course.

3. Examine the course outline with respect to order and extent of content covered in the text. This step may lead to some revisions in the initial outline.

4. Develop a list of topic areas which require selection and review of informational materials. For each topic area include the following information: (a) those materials already identified as being relevant to the course preparation process, and (b) a set of key words or phrases to be used in the search for and selection of specific material not yet identified.

5. Review materials already identified as relevant.

6. Search literature for additional items of information relevant to the course outline.

7. Revise, modify, and refine course outline based on literature review. (Steps 6 and 7 are performed throughout the course.)

These tasks may not be performed in the exact sequence mentioned above and they may require more or less effort as a function of the characteristics of the faculty member performing them. Some examples include: (1) the length of time the faculty member has been teaching the course, (2) the content characteristics associated with the discipline, and (3) the motivational characteristics of the individual instructor.

The information required to adjust and refine the initial course outline falls into two general categories or levels. The first category of information can be characterized as general background material; that is, general interest books and articles which are related to the content to be presented in the course, The second category includes highly specific information. This level of information is required for those content areas which the instructor decides to pursue in depth. Both the general and specific categories of information are composed of historical and current awareness type materials. The library as a clearinghouse should be geared to provide this retrospective and current awareness information at general and successively more specific levels and it should be set up to provide this information when it is needed.

Submission of Information Requirements to the Library

To continue the example, the course outline could serve as one vehicle for communicating faculty information requirements to the library. The exact degree of specificity that will be required in the outline in order for it to provide the library with a sufficient statement of information needs from which to operate will have to be determined through experimentation. However, some points concerning the general form of the outline can be made. First, it should include a description of the content areas to be covered and the depth of coverage planned for each area. Second, a general schedule should be included indicating the sequence in which the content areas will be presented and the amount of time allocated for each area. Third, the faculty member could indicate the type of information he needs for each section of the course (general - historical, in depth - current awareness, etc.). Fourth, if specific references have been identified, they can be provided, otherwise key words and phrases might be supplied.

Questions of Clearinghouse Implementation

There are at least four general areas in which questions of implementation arise (see Figure 4).

1. Interaction between the faculty and the library.
    - The exact format in which information requirements should be submitted to the library.
    - The procedures for disseminating materials and services to the faculty.

2. Determination of what information sources to tap.
    - Procedures for evaluating each information resource in terms of how well it meets the information requirements stated by the faculty.
    - The cost associated with each information resource must be considered with respect to the total amount of money available.

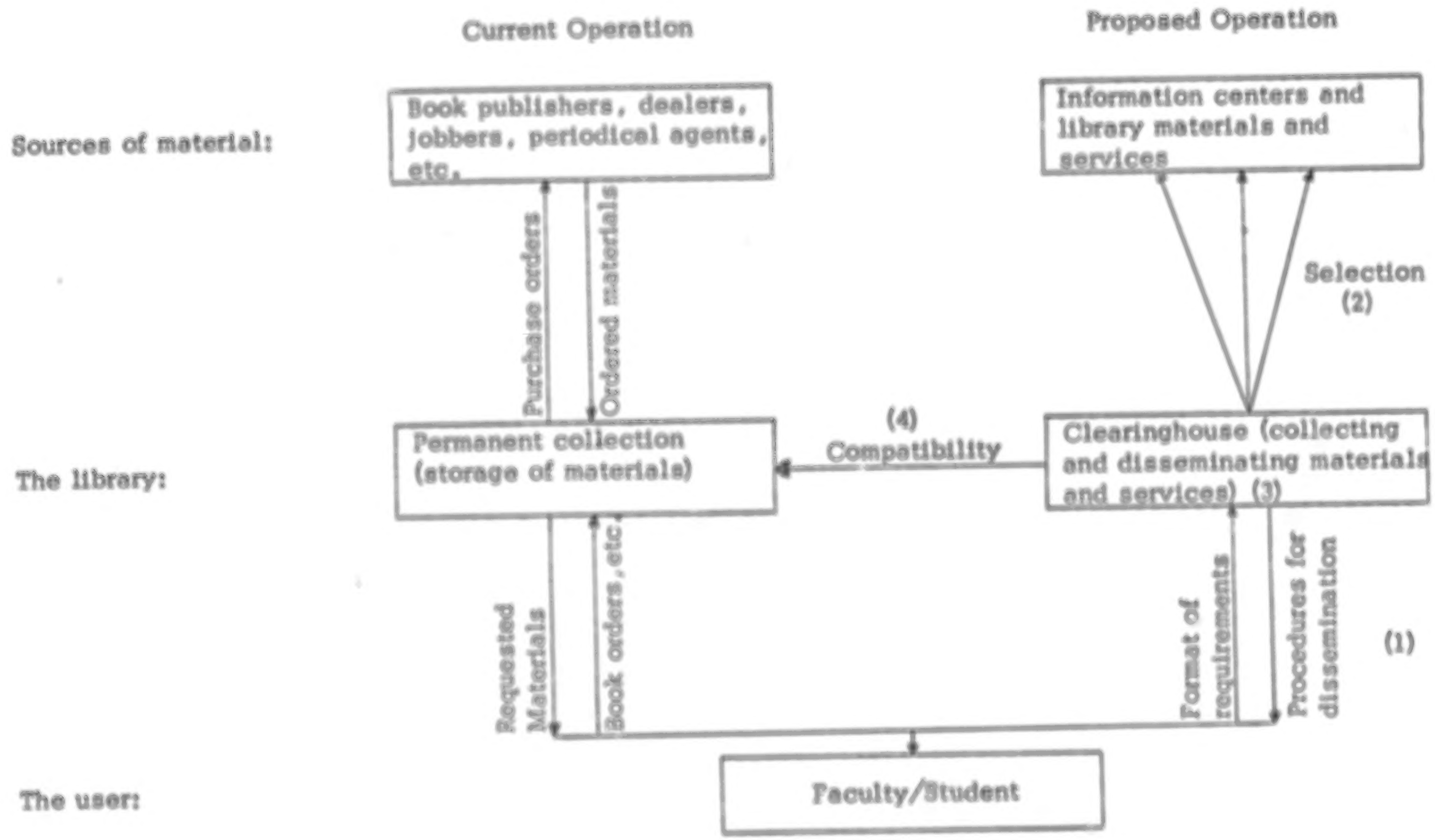
3. Internal operations of the library as a clearinghouse.
    - The procedures for organizing requests/statements of requirements; keeping track of who needs what kinds of materials and when these materials are needed (e.g., file of faculty profiles).
    - The procedures associated with identifying sources of materials and services and characterizing these sources with respect to the types of materials and services offered.
    - The procedures for matching statements of information requirements with available information resources.

4. Compatibility of operations associated with the clearinghouse and the permanent collection.

In order to evaluate alternative solutions in these four areas, data on both cost and performance characteristics are required.

FIGURE 4

The Information System


Current Operation
Proposed Operation
Sources of material:
Book publishers, dealers, jobbers, periodical agents, etc.
Information centers and library materials and services
Purchase orders
Ordered materials
Selection (2)
The library:
Permanent collection (storage of materials)
(4) Compatibility
Clearinghouse (collecting and disseminating materials and services) (3)
Requested Materials
Book orders, etc.
Format of requirements
Procedures for dissemination
(1)
The user:
Faculty/Student

Criteria for Evaluation of Alternative Solutions

The three principal criteria for evaluating the performance or the output of an information system are quality, timeliness, and completeness. Quality refers to the relevance or accuracy of the output. With respect to the clearinghouse system, quality could be measured by how well the retrieved materials meet the user's statement of requirements. That is, the degree of correspondence between the content of the retrieved materials and written statements submitted by the faculty and the students (e.g., course outlines, search requests in specified content areas, etc.). Timeliness is concerned with the provision of materials to the user when they are needed. To meet this criterion the system must supply the user with the needed materials within a specified time frame. For example, in responding to the course outline the system must be able to disseminate materials according to the time schedule specified by the faculty member. Completeness refers to the number of relevant informational materials retrieved in response to a given statement of information requirements. Thus, the greater the number of relevant items retrieved, the more complete the system's performance.

The two major categories of cost criteria are acquisition cost and utilization cost. Acquisition costs include the expenditures in time, money, and talent required to plan, develop, and procure a system. Utilization costs relate to all the expenses incurred in operating the system.

In selecting feasible configuration alternatives for implementing the various functions of the clearinghouse it is necessary to evaluate each available alternative with respect to its cost and performance characteristics. Thus, each configuration (combination of personnel, procedures, and equipment) must be evaluated in terms of its performance: quality, timeliness, and completeness;and its costs: acquisition cost and projected utilization cost. In using these criteria as a means of selecting feasible configurations from the range of available alternatives it will be necessary to specify minimum acceptable performance levels. That is, the configuration must provide the user with materials having a specified level of relevance and it must provide these materials within a given time limit. In addition, maximum cost constraints must be spelled out based on the amount of money available. Those alternatives that do not meet the established performance standards or exceed the cost limits (available funds) are eliminated from further consideration. The selection of an optimum configuration from the remaining alternatives is based on the relative importance assigned to performance and cost. For example, Configuration A may produce 30 relevant documents in response to a given statement of information requirement at cost X while System B may produce 50 relevant documents in response to the same stated requirement at a cost of X + N. If completeness is considered to be more important than cost, Configuration B will be selected, if however, cost is given a greater weight, then Configuration A will be chosen.

Summary

In summary, it is suggested that the effective provision of information service to the faculty and students requires adjustments in the available pool of materials and in the service-linkage arrangements between the library and faculty and students on the one hand, and the library and external sources of materials and services on the other hand. It is recognized that financial and procedural constraints exist and that many of the solution alternatives cannot be easily implemented. However, there are solutions which can improve service effectiveness and there are rational guides which can be applied in the selection of these solutions. The preceding discussion has undertaken to present some of the more salient possibilities and considerations. The ultimate decisions, however, must be based on experimentation, analytic evaluation, and operational trials.

APPENDIX A

The Hamline Library

Facilities and Staff

The present library facility is small and overcrowded. The stack area is not large enough to house the existing collection let alone provide space for normal collection growth. As a result, four departmental libraries were created: biology, chemistry, physics, and music. Approximately 14% of the collection is currently stored in these departmental libraries.

There are two large, open study/work areas in the library - one on the main floor where the circulation desk is located, and one in the basement in the periodical reading room. In addition, there are a few desks scattered throughout the stacks. Together, these areas provide study space for approximately 29% of the student body. Although this does not present a serious problem at the present time, it does not allow for the projected increase in enrollment. Plans are currently being developed for a new library building which will include a large stack area, several seminar rooms, open study areas, and carrels. This facility, however, will probably not be completed until early in the 1970s.

The library's current staff consists of eight full time employees, three professional librarians, one technician, two semi-professionals, and two clerks. Also 6,000 hours are utilized by the library each academic year. In addition to the head librarian, the professional staff includes the director of technical services, and a reference librarian. The acquisitions, cataloging, and serials departments are staffed almost entirely with clerks. The student help is assigned to various departments on the basis of need.

None of the main library staff is used to supervise the departmental collections.

The Collection

The current collection contains approximately 100,000 volumes. In addition to books and periodicals, the library maintains and updates a series of service publications (e.g., Federal Tax Guide). Most of the material in the library is stored in hard copy form, however, some back issues of periodicals and newspapers are kept on microfilm.

Table A-1 shows how the book portion of the collection is distributed with respect to the academic divisions - Natural Sciences, Social Sciences, and Fine Arts and Humanities. The numbers in this table are based on an estimate of the number of catalog cards included in the Library of Congress (LC) categories which are associated with each of the 18 departments. It can be seen from Table A-1 that the largest percentage of the book collection is associated with the Social Sciences Division (44.2%) followed by Fine Arts and Humanities with 38.9% and the Natural Sciences with 11.5%. In the Natural Sciences collection the biology books represent 41% of the total. The History Department accounts for 41% of the books in the Social Sciences Division and the English Department holds over 50% of the books associated with the Fine Arts and Humanities Division. In addition, the figures in Table A-1 indicate that both the History and the English Departments have more than twice as many books as any of the other departments.

Table A-2 provides a breakdown of current periodical subscriptions by Academic Division. Fifty percent of the periodical subscriptions are in content areas which are associated with the Social Sciences, 24% are in areas associated with Fine Arts and Humanities, and ten percent are in the areas dealing with the Natural Sciences.

TABLE A-1

Distribution of Book Collection by Academic Division

Natural Sciences			Social Sciences			Fine Arts and Humanities		
Department	Number	Percent*	Department	Number	Percent*	Department	Number	Percent*
Biology	3,788	4.7	History	13,312	18.6	English**	14,412	20.1
Physics	1,988	2.8	Economics	5,575	7.8	Religion	5,400	7.5
Physical Education	1,100	1.5	Education	5,325	7.4	Music	3,825	5.3
Mathematics	1,037	1.4	Political Science	3,400	4.7	Art	2,450	3.4
Chemistry	863	1.1	Sociology	2,850	4.0	Philosophy	1,875	2.6
			Psychology	1,200	1.7			
Total	8,776	11.5		31,662	44.2		27,962	38.9

Note: There is a category labelled "general" which contains 3,088 books or 4.3% of the collection.

* Figures in this column represent percentage of total book collection.

** English includes speech and theater and modern languages.

TABLE A-2

Distribution of Current Periodical Subscriptions by Academic Division

Natural Sciences			Social Sciences			Fine Arts and Humanities		
Department	Number	Percent	Department	Number	Percent	Department	Number	Percent
Biology	20	2.8	Political Science	106	14.8	English	59	8.3
Chemistry	17	2.4	Education	75	10.5	Religion	30	4.2
Physical Education	15	2.1	Economics	56	8.0	Art	27	3.8
Physics	12	1.7	Sociology	53	7.8	Speech and Theater	16	2.2
Mathematics	7	1.0	History	36	5.0	Modern Languages	13	1.8
			Psychology	30	4.2	Philosophy	13	1.8
						Music	12	1.7
Total	71	10.0		356	50.3		170	23.8

Note: There is a category labelled "general" which contains 116 periodical subscriptions (16%).

The three departments with the largest number of periodical subscriptions are Political Science (106), Education (75), and English (59), while the three departments with the fewest subscriptions are Mathematics (7), Physics (12), and Music (12).

In order to make some estimates concerning the adequacy of the collection a comparison was made between a random sample of materials listed in Books for College Libraries[1] and the books currently held by the Hamline Library. These comparisons were made in the following content areas: history, English, natural science, social science, germanic philosophy, language, and music. Table A-3 shows the results of these comparisons. The degree of match between the collection and the sample from Books for College Libraries ranges from eight percent for germanic literature to 43% for mathematics. These results tend to indicate that the collection is generally weak in providing support for the undergraduate educational program.

Policies and Procedures for Ordering Materials

The budget for purchasing new materials is divided between the library and the 18 academic departments. The amount of money allocated to each department by the library is based on previous faculty ordering patterns (i.e., the departments that submit the most orders are given the largest proportion of the budget).

During the period covering July 1966 to December 1967 approximately 9,400 books were added to the general collection. Table A-4 indicates the number of books acquired for each department and the source of the original order (faculty originated, library originated, gift). Thirty-six percent of the books received were

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[1] Books for College Libraries is a list of books recommended for undergraduate libraries.

TABLE A-3

Comparison of Collection With Recommended Books

Content Area	Percent Match
History	
. General Works	34
. Western Hemisphere History Outside U.S.	32
. General American History	30
English Literature	26
Natural Science	
. Mathematics	43
. Zoology	39
. Chemistry	30
. General Biology	29
. Physics	28
. Botany	26
. Anatomy, Physiology, and Bacteriology	18
Social Science	
. General Social Science and Statistics	29
. Anthropology	28
Germanic Philosophy	10
Music	35
Language	
. Language: General Works	40
. Germanic Literature	8

TABLE A-4

Acquisitions: July 1966 Through December 1967

Department	Faculty Originated	Library Originated	Gifts	Total	%
History	341	1,267	94	1,702	18.1
English	496	863	73	1,432	15.0
Education	444	295	104	843	8.9
Political Science	273	466	62	801	8.5
Economics	180	462	120	762	8.1
Philosophy	245	260	4	509	5.4
Sociology	199	275	23	497	5.3
Music	163	45	223	431	4.6
Religion	232	160	48	440	4.7
General	1	384	44	429	4.5
Art	114	162	39	315	3.3
Biology	97	125	18	240	2.5
Physics	82	104	10	196	2.1
Math	134	44	1	179	1.9
Psychology	81	83	11	175	1.9
Physical Education	119	25	3	147	1.6
Modern Language	77	48	6	131	1.4
Chemistry	61	45	5	111	1.2
Speech and Theater	26	67	2	95	1.0
Totals	3,365	5,180	890	9,435	

originally requested by the faculty, 55% were requested by the library staff, and nine percent were donated as gifts. In general, the distribution of added materials across departments does not differ significantly from the distribution of materials in the collection (see Table A-1). However, the Political Science and Philosophy Departments have a higher relative standing in the distribution of added materials than in the collection (i.e., Political Science: additions 8.4%, collection: 4.7%; Philosophy: additions 5.5%, collection: 2.6%) while the Biology and Religion Departments have a relatively lower position (Biology: additions 2.5%, collection 5.3%; Religion: additions 4.6%, collection 4.6%).

Records of faculty originated book requests and the actions taken by the library with regard to these requests were kept from August 1967 through February 1968. The primary purpose for keeping these records was to determine the proportion of requests that were not filled and the reasons for rejection. As can be seen from Table A-5, there are two major reasons for not filling a book request: (1) the book is currently in the collection or has already been ordered and (2) the book is out-of-print or has a low priority. Overall, 13% of all books requested by faculty members were either in the collection or on order. The percentages in this category associated with the individual departments range from zero for psychology and chemistry to 55% for political science, and eight of the 18 departments had more than 15% of their requests rejected for this reason. These figures indicate a breakdown in communication between the library and the faculty. Seventeen percent of the requested materials were found to be either out-of-print or assigned a low priority. The largest contributor to this category is the History Department with 34% (225 - low priority, 193 - out-of-print).

TABLE A-5

Books Requested by Faculty
August 1967 Through February 1968

Department	Number of Requests	% Already in Collection or on Order	% Out-of-Print	% Ordered
History	1287	8	34	58
English	466	15	6	79
Religion	300	19	21	60
Philosophy	215	1	3	96
Music	186	3.5	2.5	94
Political Science	169	55	7	38
Physics	164	7	-	93
Sociology	155	12	12	76
Education	144	20	19	61
Art	71	10	5	85
Modern Language	84	23	13	64
Economics	65	23	3	74
Chemistry	63	-	-	100
Mathematics	60	17	3	80
Speech and Theater	20	25	5	70
Physical Education	20	10	-	90
Biology	19	5	-	95
Psychology	14	-	7	93
Totals	3502	13	17	70

Services

The library has recently compiled a list of services which are available to faculty and members of the student body. Some examples of these services include (1) locating requested materials, (2) answering general reference questions, (3) preparing and circulating new book lists monthly, and (4) compiling bibliographies on selected subjects. (For a complete list of services see Table A-6.)

Between October 1 and December 15, 1967 records were kept at the reference desk of the library concerning the number of questions asked each day and the content of these questions. Table A-7 shows a frequency distribition of questions asked each week. It can be seen from this table that the mean number of questions asked per day was 11. The number of questions asked in any one day varied from two to 41.

Table A-8 provides a breakdown of reference questions by type. The six general categories include:

- Library policies, procedures, and facilities.
- Location of specific titles.
- Inclusion of specific titles in the collection.
- Factual inquiries.
- General guidance (seeking assistance in identifying relevant materials).
- Procedures associated with the cooperative network (seven colleges in Twin Cities).

TABLE A-6

Hamline University Library Services

Faculty

Reference Service

Identify and confirm bibliographic information
Locate materials
Obtain materials by interlibrary loans
Obtain photocopies of materials when appropriate
Provide introductions for faculty to use non-circulating collections
Answer general reference questions
Answer factual or specific informational reference questions
Provide readers' advisory services
Assist in the use of the card catalog and other bibliographic tools
Compile bibliographies on various subjects as requested
Provide tours on location of materials and tools
Provide lectures to classes on tools for use in a subject field as requested

Reserve Collection

Place materials required for student assignments on reserve
Check reserve list requests against Hamline holdings
Obtain multiple copies as appropriate
Make photocopies of periodical articles as appropriate
Deliver materials to classroom for professor to introduce them and encourage their use

Acquisitions Services

Solicit book and periodical requests
Encourage and assist in weeding subject collections
Monitor and coordinate departmental book budgets
Prepare and distribute monthly Selected New Books List
Send book reviews from Choice magazine to each department monthly
Send special publication notices and reviews as discovered
Meet with faculty to discuss their interests and needs for informational materials
Check bibliographies against Hamline holdings as requested

TABLE A-6 (Cont.)

Notify faculty when a requested item is received, if the faculty member asks to be notified
Notify faculty when a requested item is out of print
Rush order material as need arises
Attempt to notify faculty when receipt of ordered materials is delayed

Other Services

Display books and articles about speakers and their topics (convocations, guest lectures and performers, visiting faculty)
Provide photocopying on Xerox 914 or 3-M
Maintain archives of campus and faculty publications and student honors papers
Attempt to alert and or send copies of articles from unexpected sources that relate to faculty interests
Find and hold books in the collections, deliver as requested
Compile list of books currently charged to each faculty member each May
Lend paintings and reproductions

Students

Acquisitions

Solicit book and periodical requests
Prepare and distribute monthly Selected New Books list

Reserves

Place materials required for student assignments on reserve
Make photocopies of periodical articles as appropriate
Deliver materials to classroom for professor to introduce them and encourage their use

Reference

Obtain materials by interlibrary loans
Locate books although we cannot borrow the books
Answer general reference questions

TABLE A-6 (Cont.)

- Supply factual or informational reference material
- Identify and confirm bibliographic information
- Provide readers' advisory services
- Provide introductions and arrange for visits to various special libraries

Library Instruction and Use

- Provide freshman orientation tours
- Provide tours on location of materials and tools
- Provide tapes on use of certain areas of the library, such as use of the card catalog or of the periodical indexes and collection
- Provide handbook and bookmarks of library policies
- Provide Enoch Pratt list of reference books to interested students

Other Services

- Display books and articles about speakers and their topics (convocations, guest lectures and performers, visiting faculty)
- Provide photocopying on Xerox 914 or 3-M
- Maintain archives of campus and faculty publications and student honors papers
- Provide lectures to classes on tools for use in a subject field as requested
- Lend paintings and reproductions
- Compile list of books checked out to each student at the end of each term
- Obtain materials by interlibrary loans

TABLE A-7

Distribution of Reference Questions by Week

Week	Faculty	Student	Total
Oct. 1-6	9	45	54
Oct. 8-13	8	49	57
Oct. 15-20	9	77	86
Oct. 22-27	14	38	52
Oct. 29-Nov. 3	6	51	57
Nov. 5-10	14	56	70
Nov. 12-17	15	109	124
Nov. 19-24	8	43	51
Nov. 26-Dec. 1	16	65	81
Dec. 3-8	9	65	74
Dec. 10-15	7	30	37
	115	628	743

Overall mean 11.6

TABLE A-8

Distribution of Reference Questions by Type

	Library Policies, Procedures, Facilities	Location of Materials	Inclusion of Title in Collection	Fact Gathering	General Guidance	Procedures for Network
Facility	5	20	32	38	10	0
Student	100	147	82	64	187	5
Total	105	167	114	102	197	5

TABLE A-9

Hamline University Library Budget and Spending

Budget Categories	Years 57/58	58/59	59/60	60/61
Total number of volumes	72,654	76,084	79,810	81,837
Total volumes added	3,430	3,726	2,595	2,311
Total volumes withdrawn	0	0	568	0
New volumes added	3,430	3,726	2,027	2,311
Number of students	1,220	1,181	1,035	1,087
Total number of volumes per student	60	64	77	75
Total spent for libraries	38,121	42,832	44,278	45,297
Total spent for books	8,016	8,201	9,622	9,945
Total spent for periodicals and binding	4,007	4,840	4,200	4,131
Total library materials	12,023	13,041	13,822	14,076
Total staff and benefits	24,576	27,868	29,409	29,842
Total spent by university	1,067,366	1,118,646	1,141,458	1,155,255
Library percentages:				
Library/university	3.6%	3.8%	3.9%	3.9%
Materials/library	31.5%	30.4%	31.2%	31.1%
Staff/library	64.5%	65.1%	66.4%	65.9%
Library expenditures per student	31	36	43	42
Library materials expenditures per student	10	11	13	13

61/62	62/63	63/64	64/65	65/66	66/67	67/68
84,148	86,559	89,752	86,908	90,260	94,084	101,695
2,411	3,193	2,979	3,497	5,523	8,022	
0	0	5,927	41	1,699	411	
2,411	3,193	-2,948	3,456	3,824	7,611	
1,054	1,052	979	976	1,129	1,187	1,232
80	82	92	89	80	79	83
49,066	58,311	60,855	60,442	86,499	98,811	
11,575	17,659	15,672	14,707	27,575	30,395	
4,238	4,953	5,108	6,719	8,461	11,078	
15,813	22,612	20,780	21,426	36,036	41,473	
31,741	34,448	35,344	37,039	46,571	51,847	
1,290,282	1,390,558	1,485,837	1,587,084	1,998,499	2,346,496	
3.8% 32.2% 64.7%	4.2% 38.8% 59.1%	4.1% 34.1% 58.1%	3.8% 35.5% 61.3%	4.3% 41.7% 53.8%	4.2% 42.0% 52.5%	
47	55	62	62	77	83	
15	21	21	22	32	35	

Task Statements and Flow Diagrams for Technical Services Operations

- Acquisitions
- Cataloging
- Serials
- Marking

A. Acquisitions

Steps for Processing Normal Material

Step 1 - Receive book order cards

1. Faculty and departmental libraries
2. Head Technical Services
3. Head Librarian
4. Reference
5. Circulation
6. Other

Step 2 - Check files to determine if book is already in the library or has been ordered

1. On order file: arranged by author
2. Books received file: arranged by author
3. Public catalog: arranged by author, by subject, by title
4. Continuation file: arranged by series title
5. Government and UN publications: on order and received: arranged by title

Step 3 - Order books and/or government publications

1. Make up purchase order
2. File copy purchase order in on order file by vendor
3. File copy of purchase order by number
4. Send copy of purchase order to purchasing office
5. If pre-pay (government publication, book under $2.00, or special continuation) then send money along with purchase order otherwise hold payment until invoice and ordered materials are received. Purchase order contains account number and name of person to whom check should be made out
6. Put purchase order number and date of order on order card and file

Step 4 - When ordered materials are received -

1. Check materials against purchase order if pre-payment procedure has been used.

    a. If the materials are incorrect write for correct ones
    b. If invoice is sent, return it and indicate that payment has already been made

2. Check materials against invoice if materials have not been prepaid

    a. If invoice is not received with books, hold books until invoice is received
    b. Write letter to book dealer if:

        - Books are listed on invoice but not received
        - Books are received but not listed on invoice
        - Books listed on invoice but not on purchase order
        - Library has made an error and ordered the wrong books

    c. If invoice, books and purchase order check

        - Stamp duplicate copy of invoice with account number
        - Send copy of invoice to purchase office

3. Enter date received and cost on book order card and file card in books received file (this file includes order cards for two years). Bring continuation file payment record up to date

4. Record cost and purchase order number in budget notebook (book budgets are provided for each department and for the library)

5. Stamp book with accessions number and Hamline University identification

6. Record routing and continuation information on slip, put slip in book

Step 5 - Send book to cataloging section

Step 6 - Send monthly budget statement to department chairman showing how much spend, how much left, amount started with and amount on order

Steps for Processing Gifts

Step 1 - Send unsolicited gift materials to Head Technical Service for selection

Step 2 - For materials selected:

1. Make up slip with donors name and put in book
2. Stamp accession number in book
3. File card in books received file
4. List donors name in gift record

Step 3 - Send book to cataloging section

B. Cataloging

Step 1A - Receive proof slips (cards for books currently being cataloged at Library of Congress) from Library of Congress. These were first ordered in July 1966.

1. Throw out cards on phonograph records and non English language publications (except foreign music scores).
2. File the remainder in alphabetical order by main entry. In the case of government and United Nations Publications file by title. This task requires approximately 12 man hours per week.

Step 1B - Receive books and government documents from acquisitions (most books contain a library of congress order number).

Step 2A - Obtain cataloging information for each book (main entry, added entries and explanatory notes).

1. Separate books into classes by date: 1959 and before; 1960-1965; 1966-1967.
2. If book was published in 1959 or before - look up in National Union Catalog (compilation of main entry cards for most of the books that have been published, both U.S. and foreign). If book is not listed in the National Union Catalog then do original cataloging.
3. If book published 1960-1965 order cards from library of Congress (usually takes 2 months to receive). If cards are not available from Library of Congress then check National Union Catalog. If there is no listing in National Union Catalog go to original cataloging.
4. If book published in 1966-1967 first match with proof slip. If no proof slip hold book for about a month to see if proof slips come in, if not then order cards from Library of Congress. If cards are not available at Library of Congress then check Union Catalog. If no listing is found go to original cataloging.

Step 2B - Original cataloging is done for approximately 10% of books received (mainly music and K class political science books). A Library of Congress number, explanatory notes and subject headings are developed for each book using the following guides. Added entries are made for additional sections and for title when appropriate.

1. Library of Congress Classification System* is the authority for assigning call numbers. Call numbers assigned to other books with similar content may also provide some assistance.

2. Table of contents, authors background, and introduction are used to determine content.

3. Library of Congress catalog of printed cards and Hamline public catalog are used to determine the correct form for author entry.

4. Library of Congress authority list for subject headings is used for assigning subject headings.

Step 3 - Type up card set for each book. This set includes: 1 card for the shelf list (a file ordered by book number) and cards for the public catalog; 1 main entry card (author or title if no author) and 1 card for each tracing; in some cases a cross reference card may be required.

Step 4 - File card in shelf list and send remainder of card set to circulation desk for entry into public catalog.

Step 5 - Send books to marking room (indicate which are reference books and books for departmental libraries).

Additional functions -

- Make up book list (new acquisitions) each month and send around to department chairman and other libraries in the area. The list contains approximately 600 items and is organized by general areas of interest (i.e., English Science, etc. according to Library of Congress classification scheme).

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* Shows how Library of Congress call numbers are made up.

- Once every 5 years, check shelves in stacks for missing books using shelf list.

- Keep up archives. Archives are cataloged separately. They are kept in a vault in the library. The archives include such items as senior honor papers, methodist church journals and yearbooks, faculty documents, the Hamline newspaper: The Oracle, the Hamline Yearbook (Liner), etc.

- Withdraw card sets for discarded items.

- Notify users as requested.

C. Marking

Step 1 - Type cards and pockets for stack books.

Step 2 - Type labels for spine of book.

Step 3 - Match labels with book (check numbers); peel off label backing and line up label on the spine of the book; press iron on label.

Step 4 - For stack books: paste pocket on book and insert book card. For reference books: paste reference stickers and bookplate inside front cover.

Step 5 - Check cards with stack books to see if they match.

Step 6 - Send requested books to departmental libraries and reference, put remainder of books on cart for shelving in general stacks circulation department.

Step 7 - Shelve books.

D. Serials

Steps for Processing Regular Material

Step 1 - Make list of periodicals to be ordered. The sources used to compile this list include:

1. Faculty suggestions for new periodicals.
2. Students requests to reference librarian which could not be satisfied by existing periodical collection at Hamline.
3. Special lists of periodicals (match list with collection to find inadequacies).
4. Notices from publishers advertising new periodicals.
5. Periodicals which list and review new publications:
    - Library Journal
    - Bulletin of Bibliography
    - College and Research Libraries
    - Scientific Information Notes
    - Etc.

Step 2 - Send list compiled in Step 1 to each department and ask for additional suggestions.

Step 3 - Order suggested periodicals from agent or publisher if they are within the budget. Hold remaining periodical suggestions for future funds. As of July 1967 there are approximately 705 periodicals in the collection.

Step 4 - When periodical mail is received -

1. Check to see if correct issue has been sent.
    - If issue is incorrect, complete and send claim slip to the publishers.

2. Enter volume, number, cost, etc. in the Kardex (a file - by title - of periodicals currently being subscribed to by the library). Payment records are kept on the back of each card.

Step 5 - Send copies of invoices to purchase office.

Step 6 - Route library journals (e.g., College and Research Libraries) to library staff; send requested periodicals to departmental libraries; send remaining periodicals to periodicals reading room.

Step 7 - Each year check unbound periodicals to see if volumes are complete.

1. If incomplete, order missing issues from the publisher.

2. If complete, send to bindery (usually done during the summer).

Steps for Obtaining Back Issues

Step 1 - Make a list of back issues that are needed.

1. Receive requests from faculty and students.

2. Identify missing issues when checking collection.

Step 2 - Order back issues from the publisher.

Step 3 - When mail is received -

1. Check to see if correct issue has been sent.

    . If not send claim slip to publisher.

2. Enter appropriate information in Kardex.

Step 4 - Send copies of invoice to purchase office.

Step 5 - Send issues to appropriate department library or integrate them into the periodical collection.

Additional functions -

- Hamline is currently trying to organize the periodical files so that they can be put on IBM cards. Such information as name, date, volume (indicate those that are missing), subject interest, and location will be included.
- After information has been transferred to punch cards a print-out will be obtained. This print-out will be sent around to other colleges in the Twin Cities area.
- In addition, a coordinated periodical listing will be worked out with Macalester College (Macalester already has their periodicals on punch cards).

E. Reference

Internal Reference Functions:

1. Decide which volumes should be included in reference collection and which should be included in general collection (stack books). The reference collection consists primarily of bibliographies, guides to the literature, union catalogues, encyclopedias, books of statistical tables, etc. At present, the reference collection consists of 1200 titles and 3600 volumes.

2. Keep reference collection up to date - select new reference books, throw out old editions, etc.

3. Make recommendations to the acquisitions and the serials divisions concerning the acquisition of new books and periodicals. These recommendations are based on requests by students and faculty and on the reference librarian's judgment.

4. Maintain reference file.

Cooperation With and/or Use of External Sources:

1. Coordination between several colleges in the St. Paul, Minneapolis area: Bethel, Concordia, St. Paul Bible College, St. Thomas, St. Catherine, Macalester, Augsburg, and Hamline.*

    a. These colleges provide each other with assistance in handling reference questions.

    b. They have set up inter-library loan agreements. On request xerox copies are provided of any type of material. At the present time these arrangements are on an informal basis.

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* The University of Minnesota does not participate in inter-library loan. They make their collection available but the user must come to the university to make use of it.

- Hamline received most of its requests from Bethel, Concordia, and St. Paul Bible College (approximately 60 requests over a 10-week period).

- Hamline requests most material from St. Thomas, St. Catherine, and Macalester. (About 60 requests over a 10-week period.)

2. Some limited use is made of DDC and the Clearinghouse. This involves the ordering of specific reports.

3. An attempt was made to use the "Current Contents" service provided by the Institute for Scientific Information, however, the faculty members contacted were not interested.

4. In the future some use may be made of the services offered by National Library of Medicine.

5. Photoduplication services provided by the Library of Congress are used to a limited extent.

6. Industrial Libraries (3M, Pillsbury, Honeywell) are occasionally used to answer reference questions or to provide inter-library loan material.

7. Some universities and colleges outside the region are used for inter-library loan materials.

8. Some use is made of University Microfilms, Inc. (demand publishers) in Ann Arbor.

9. Special libraries such as Luther Seminary, Hennepin County Medical Association Library, Minnesota Historical Society, etc. are used to answer reference questions.

10. Get reference help and inter-library loan from various city, state, and federal offices such as U.S. Commerce Department field office in Minneapolis.

Services Provided to Faculty and Students: (The reference service is asked between 5 and 10 questions a day.)

1. Provide reference information to aid in starting a literature search in an area unfamiliar to the user, or in locating and learning to use library sources and tools. This service is used primarily by students.
2. Provide factual information (i.e., an answer to a question). This service is used primarily by the faculty - some of these requests are over the phone.
3. Students are referred to other libraries in the area.
4. Library personnel have given lectures to various classes on use of basic library tools in a subject area.

F. Circulation

1. Student help in library.

    a. Hires

    b. Schedules students for circulation work and coordinates student staff for technical services departments

    c. Train students for tasks in circulation department

    d. Supervises circulation work

        (1) Processing reserve books

        - Taking books out of stacks and shelving in reserve book section
        - Typing up cards for reserve books
        - Checking out reserve books
        - Typing fine notices

        (2) Check out stack books first, file cards in daily charge file then file in term charge file

        - Use colored tabs to indicate when book is due back and whether book is on inter-library loan

        (3) Stack maintenance

        - Shelve books in stacks
        - Inspect and read shelves to make sure books are in order - this is an on-going task
        - Repair books

        (4) Answer students' questions and refer students to reference librarian

        (5) Make xerox copies of requested materials

(6) Search for lost and missing material

- Type up order cards for missing books

(7) Make up displays and posters for the library

(8) File in card catalog

(9) Search book lists for acquisitions

(10) Keep circulation statistics

- Number of items checked out each day by students or by faculty. Tabulation is done by stack book, reserve book, periodical
- For each group of items, compute a total for each month. Then calculate cumulative total (i.e., for number of months included in the record)
- Head counts

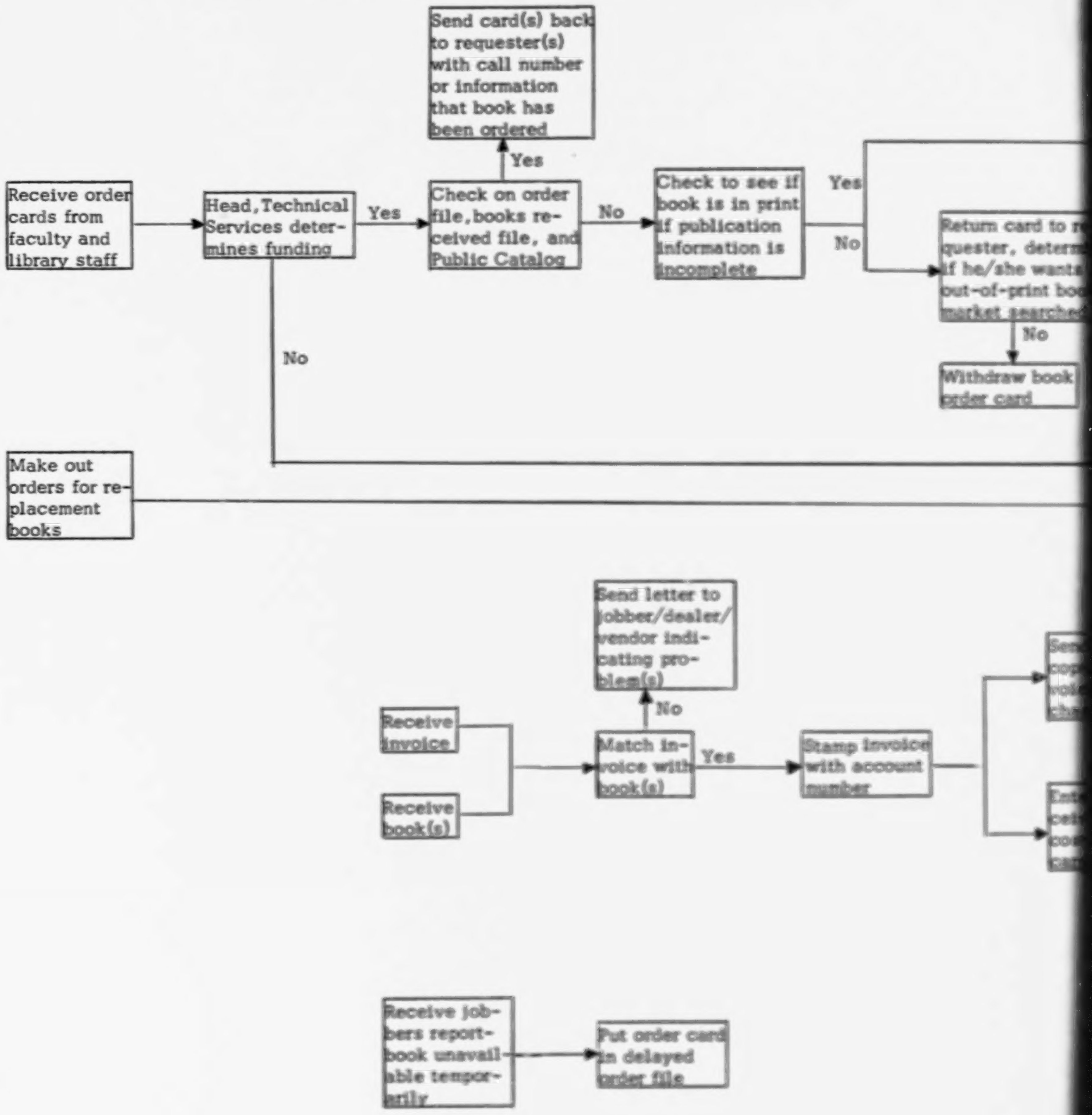
(11) Maintain circulation files

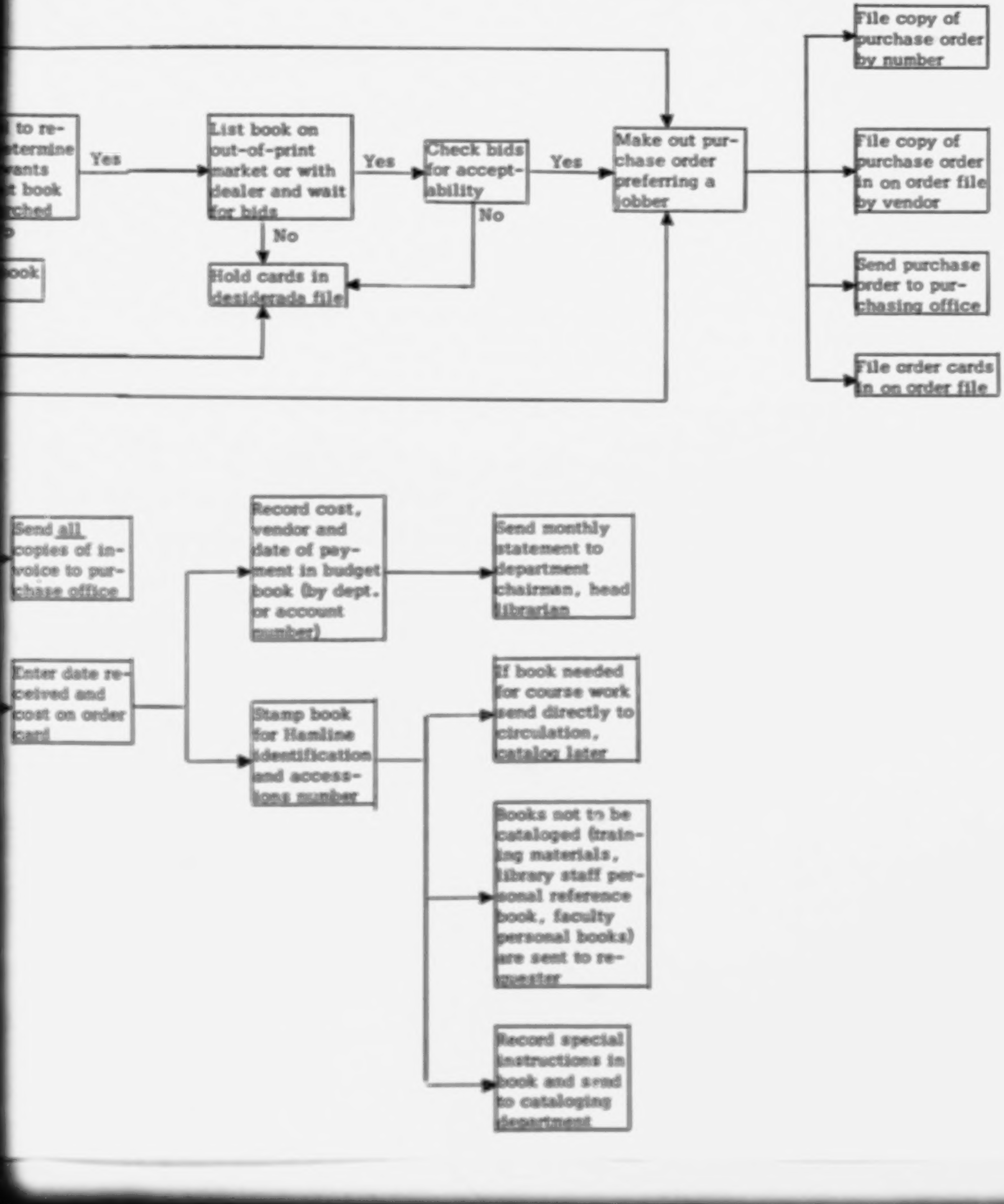
- Term charges
- Daily charges
- Reserve book
- Picture rental
- Periodical circulation

e. Pay students

2. Do reference work
3. Write reports and analyze circulation statistics
4. Coordinate with faculty on reserve books
5. Initiate search of lost and missing books

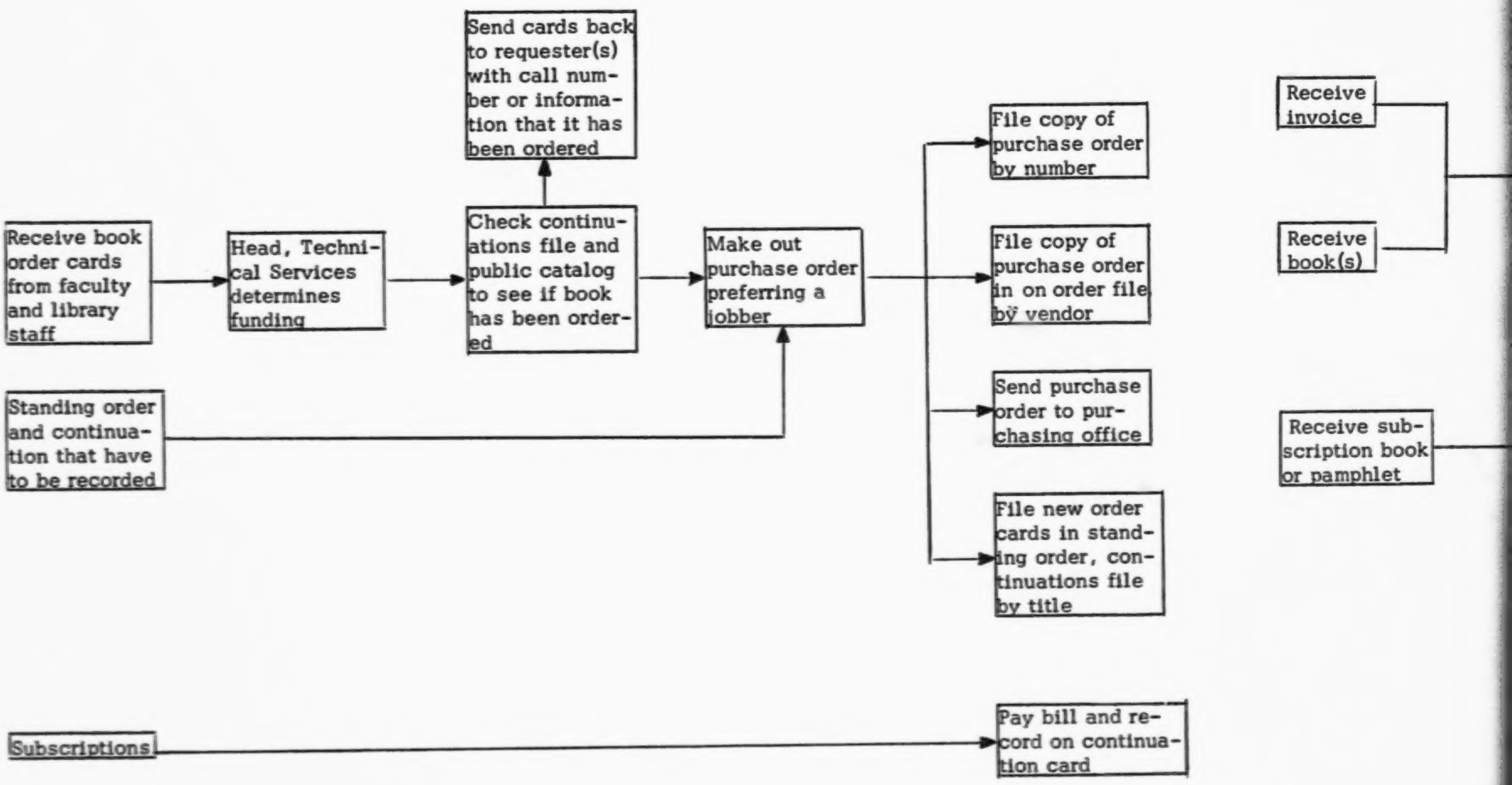
Acquisitions: Regular Books, Out-of-Print Books, Replacement Books and Books on Microfilm

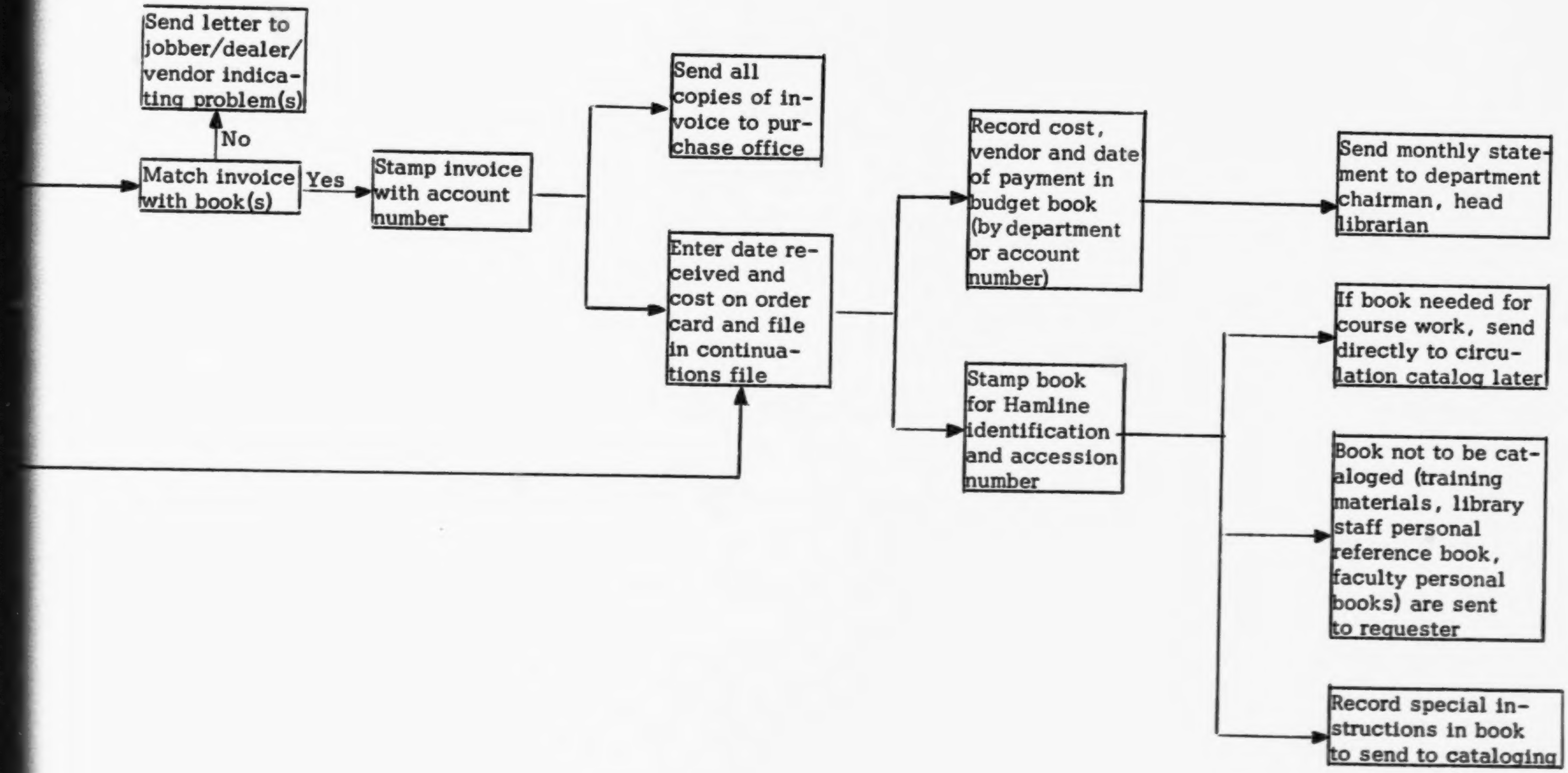

Send card(s) back to requester(s) with call number or information that book has been ordered
Yes
Receive order cards from faculty and library staff
Head, Technical Services determines funding
Yes
Check on order file, books received file, and Public Catalog
No
Check to see if book is in print if publication information is incomplete
Yes
No
Return card to re-
quester, determ
if he/she wants
out-of-print boo
market searched
No
Withdraw book order card
No
Make out orders for replacement books
Send letter to jobber/dealer/vendor indicating problem(s)
No
Receive invoice
Receive book(s)
Match invoice with book(s)
Yes
Stamp invoice with account number
Send
cop
voic
cha
Ent
cei
co
ca
Receive jobbers report-book unavailable temporarily
Put order card in delayed order file


to re-
termine
vants
t book
rched
o
Yes
List book on out-of-print market or with dealer and wait for bids
Yes
Check bids for acceptability
Yes
No
No
Make out purchase order preferring a jobber
ook
Hold cards in desiderada file
File copy of purchase order by number
File copy of purchase order in on order file by vendor
Send purchase order to purchasing office
File order cards in on order file
Send all copies of invoice to purchase office
Enter date received and cost on order card
Record cost, vendor and date of payment in budget book (by dept. or account number)
Stamp book for Hamline identification and accessions number
Send monthly statement to department chairman, head librarian
If book needed for course work send directly to circulation, catalog later
Books not to be cataloged (training materials, library staff personal reference book, faculty personal books) are sent to requester
Record special instructions in book and send to cataloging department

Acquisitions: Regular Books, Out-of-Print Books, Replacement Books and Books on Microfilm

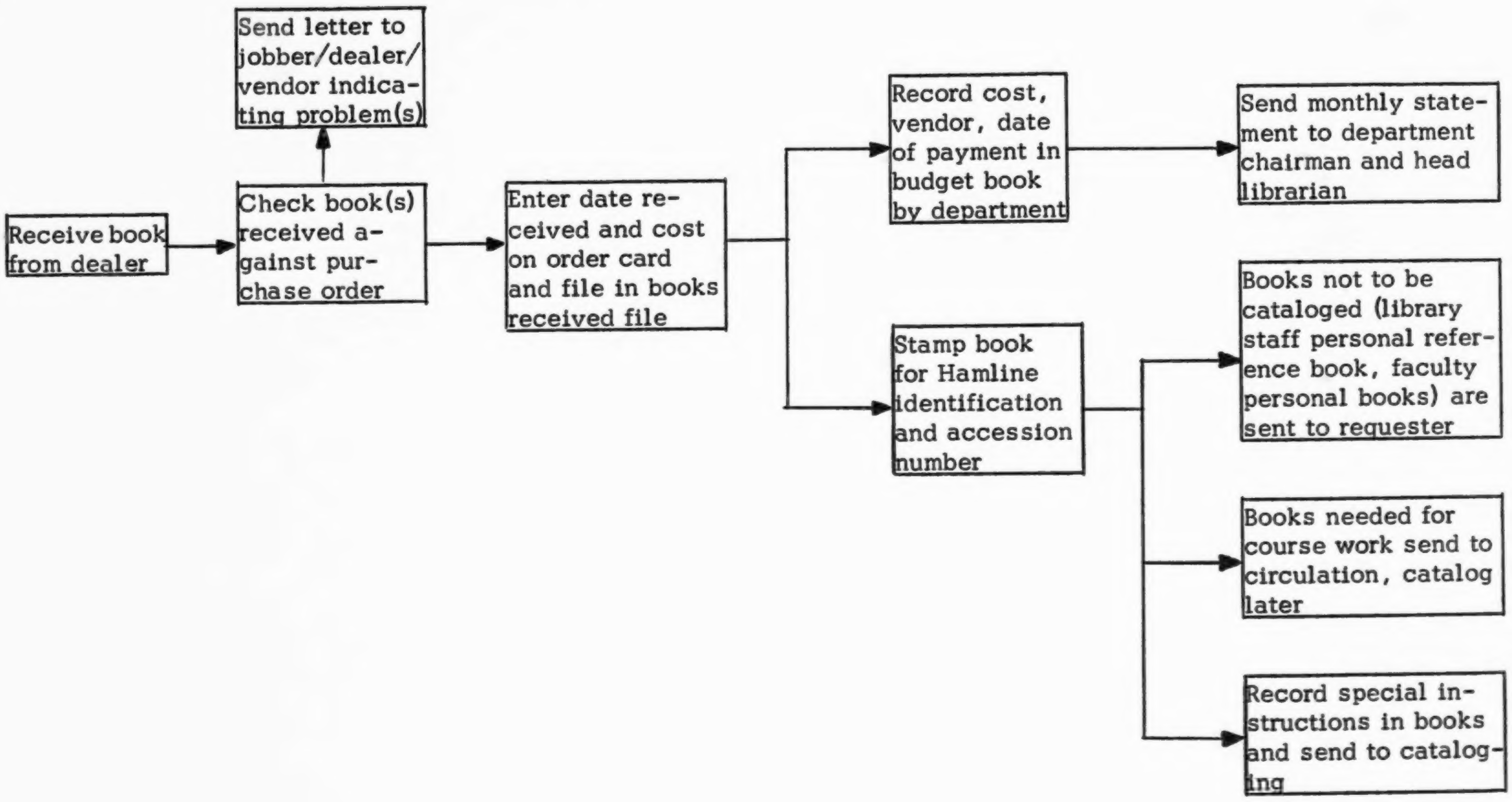
Acquisitions: Standing Orders, Continuations, Slowly-Issued Terminal Sets

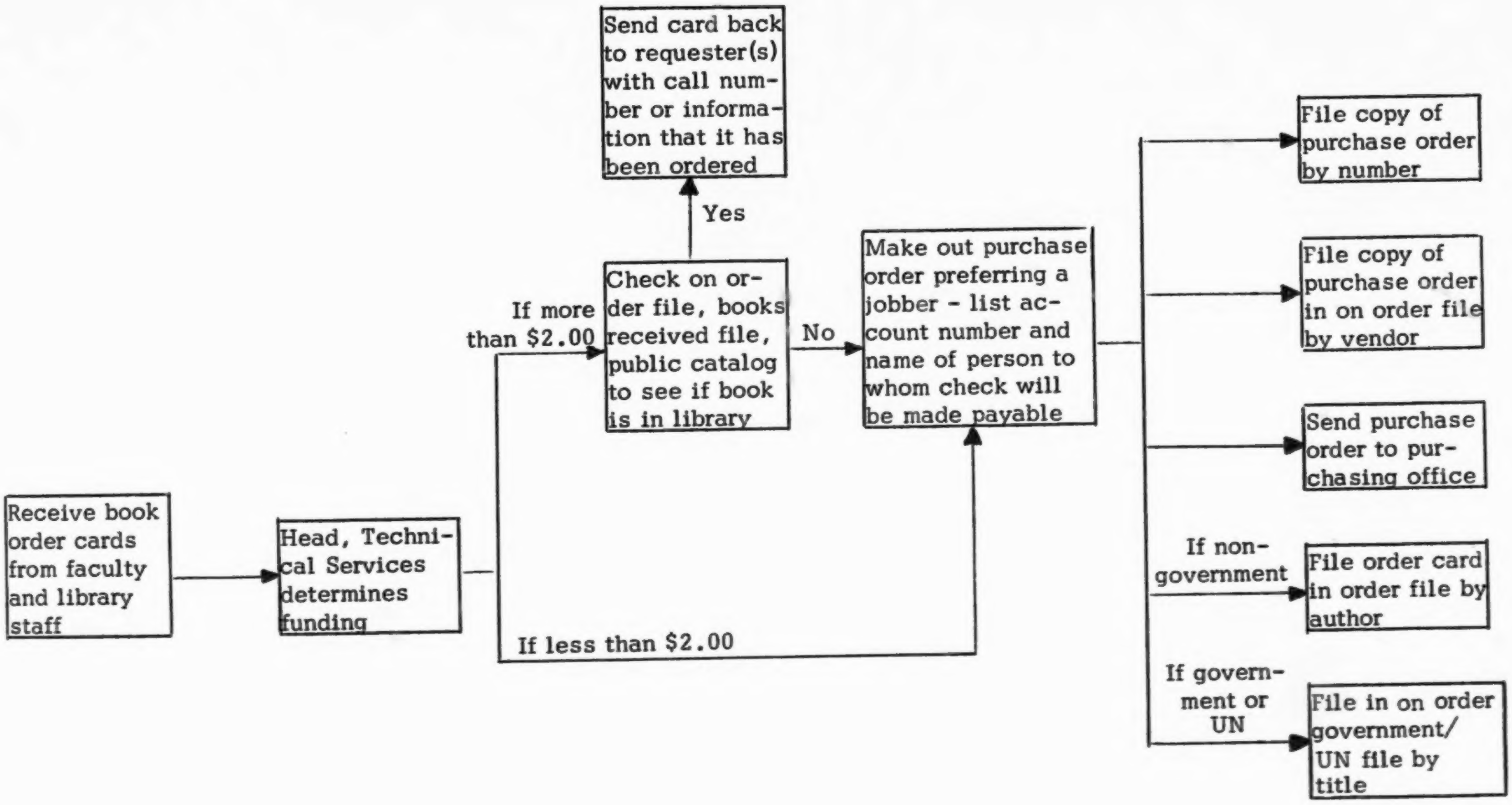

Receive book order cards from faculty and library staff
Head, Technical Services determines funding
Check continuations file and public catalog to see if book has been ordered
Send cards back to requester(s) with call number or information that it has been ordered
Make out purchase order preferring a jobber
Standing order and continuation that have to be recorded
File copy of purchase order by number
File copy of purchase order in on order file by vendor
Send purchase order to purchasing office
File new order cards in standing order, continuations file by title
Subscriptions
Pay bill and record on continuation card
Receive invoice
Receive book(s)
Receive subscription book or pamphlet


Send letter to jobber/dealer/vendor indicating problem(s)
No
Match invoice with book(s)
Yes
Stamp invoice with account number
Send all copies of invoice to purchase office
Enter date received and cost on order card and file in continuations file
Record cost, vendor and date of payment in budget book (by department or account number)
Stamp book for Hamline identification and accession number
Send monthly statement to department chairman, head librarian
If book needed for course work, send directly to circulation catalog later
Book not to be cataloged (training materials, library staff personal reference book, faculty personal books) are sent to requester
Record special instructions in book to send to cataloging

Acquisitions: Standing Orders, Continuations, Slowly-Issued Terminal Sets

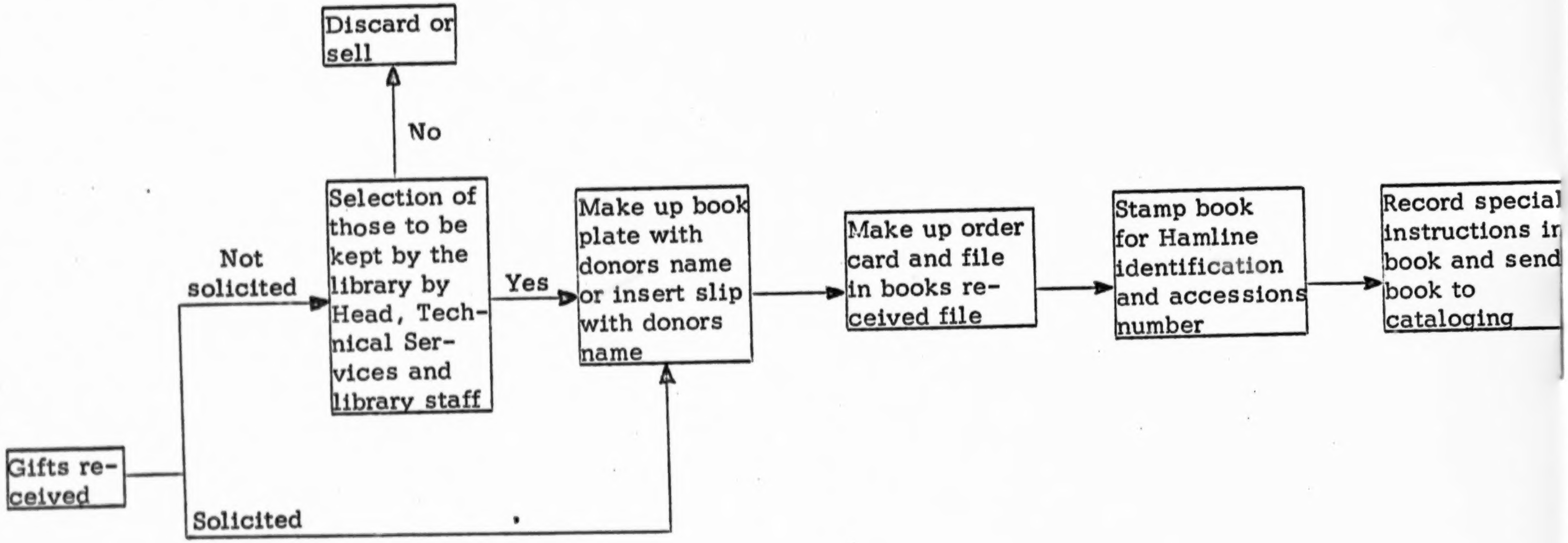
Acquisitions: Prepays


Receive book from dealer
Check book(s) received against purchase order
Send letter to jobber/dealer/vendor indicating problem(s)
Enter date received and cost on order card and file in books received file
Record cost, vendor, date of payment in budget book by department
Send monthly statement to department chairman and head librarian
Stamp book for Hamline identification and accession number
Books not to be cataloged (library staff personal reference book, faculty personal books) are sent to requester
Books needed for course work send to circulation, catalog later
Record special instructions in books and send to cataloging

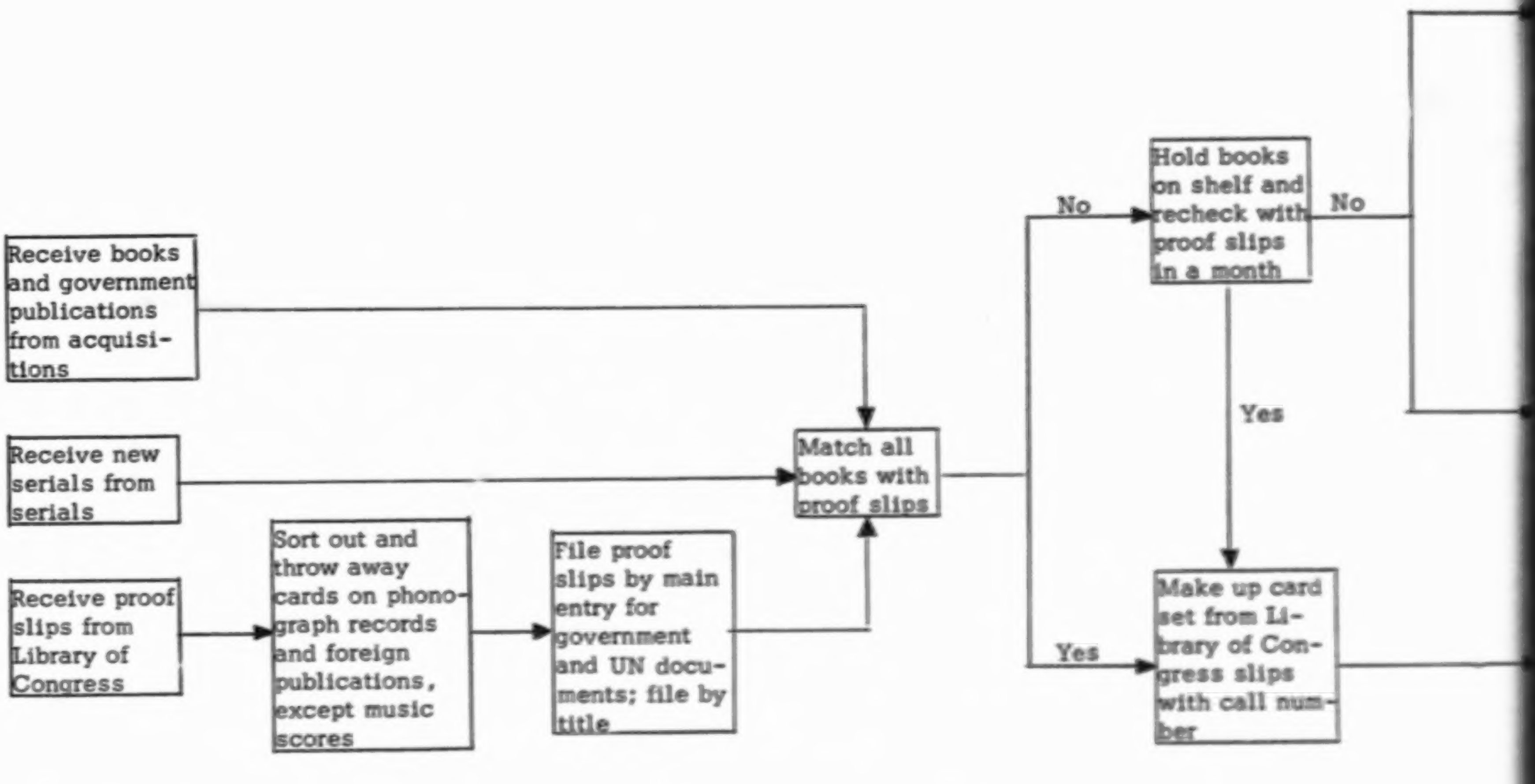

Receive book order cards from faculty and library staff
Head, Technical Services determines funding
If more than $2.00
If less than $2.00
Check on order file, books received file, public catalog to see if book is in library
Yes
Send card back to requester(s) with call number or information that it has been ordered
No
Make out purchase order preferring a jobber - list account number and name of person to whom check will be made payable
File copy of purchase order by number
File copy of purchase order in on order file by vendor
Send purchase order to purchasing office
If non-government
File order card in order file by author
If government or UN
File in on order government/UN file by title

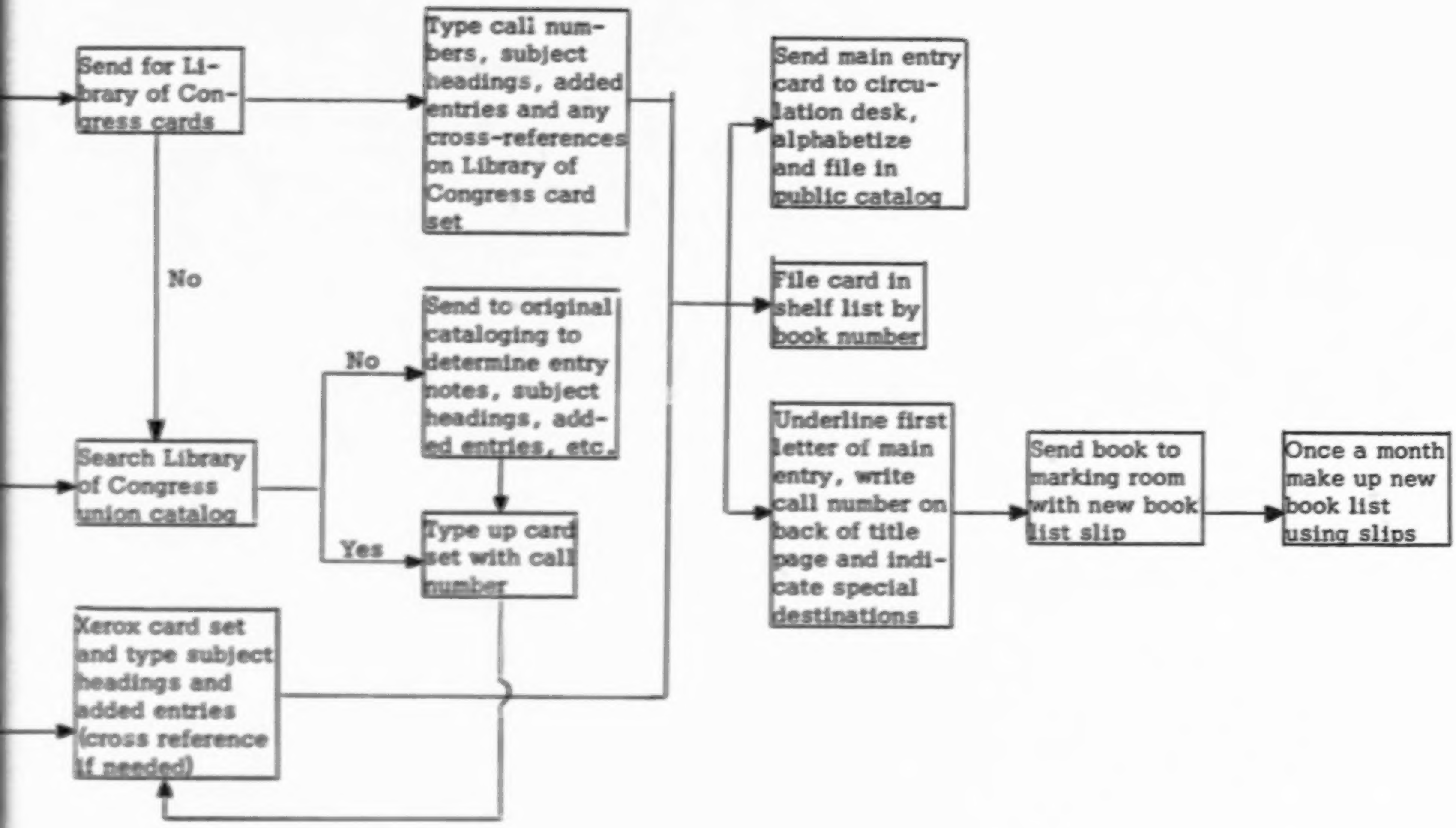
Acquisitions: Prepays

Acquisitions: Gifts


Gifts re-ceived
Not solicited
Solicited
Selection of those to be kept by the library by Head, Technical Services and library staff
No
Discard or sell
Yes
Make up book plate with donors name or insert slip with donors name
Make up order card and file in books received file
Stamp book for Hamline identification and accessions number
Record special instructions in book and send book to cataloging

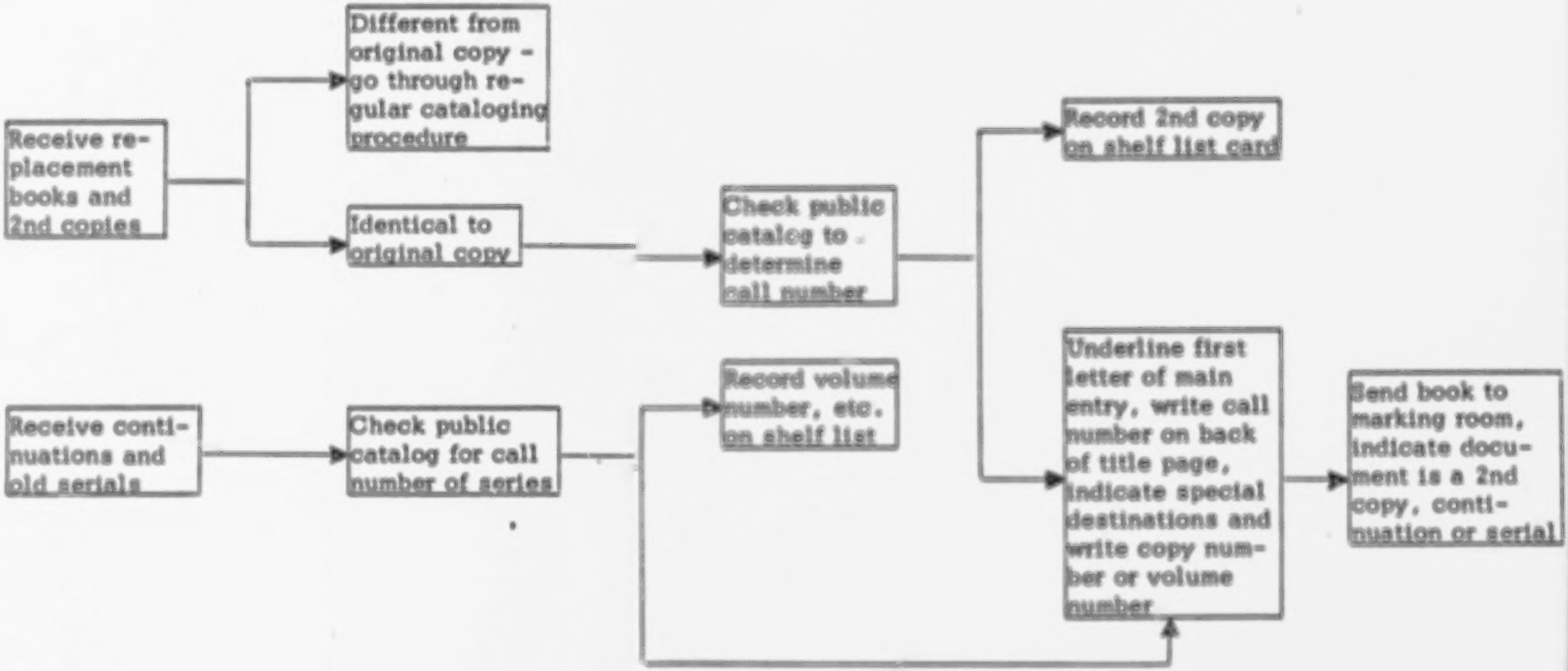
Cataloging: Separates, New Edition Replacement Books, New Serials and New Continuations


Receive books and government publications from acquisitions
Receive new serials from serials
Receive proof slips from Library of Congress
Sort out and throw away cards on phonograph records and foreign publications, except music scores
File proof slips by main entry for government and UN documents; file by title
Match all books with proof slips
No
Yes
Hold books on shelf and recheck with proof slips in a month
No
Yes
Make up card set from Library of Congress slips with call number

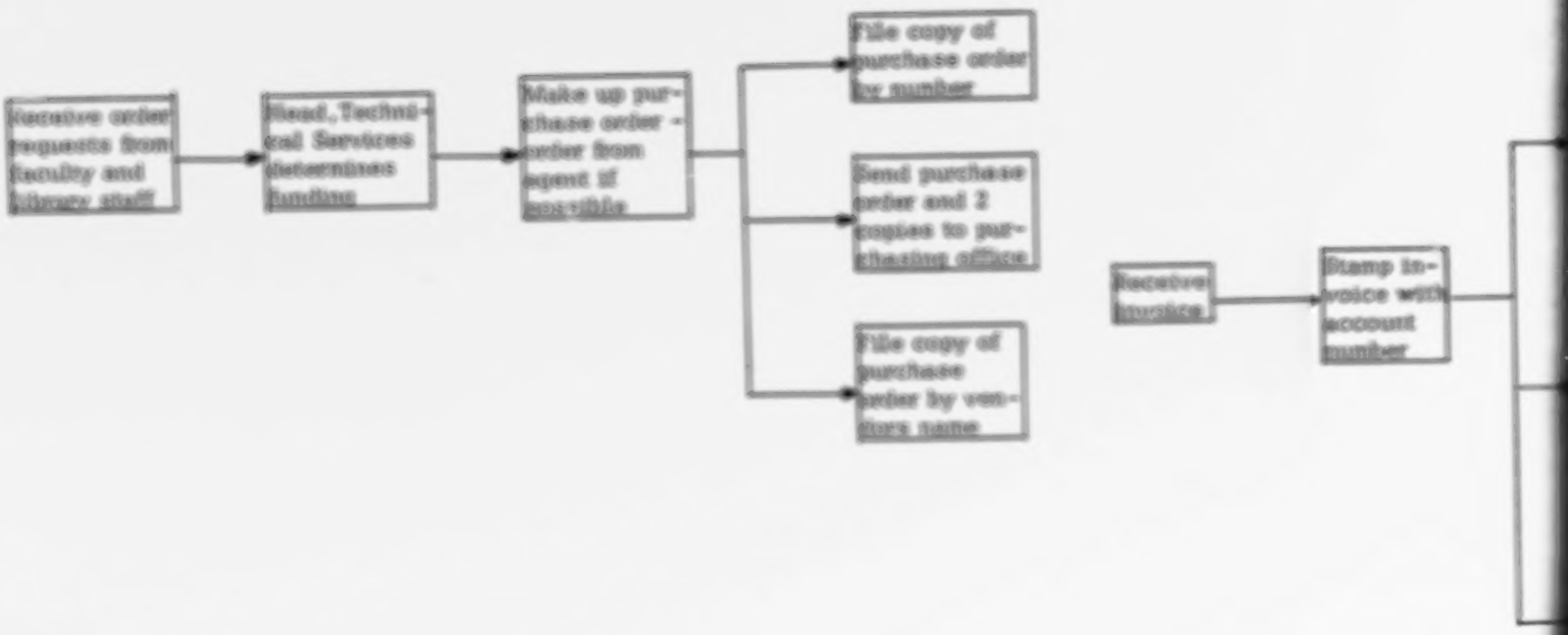

Send for Library of Congress cards
Type call numbers, subject headings, added entries and any cross-references on Library of Congress card set
Send main entry card to circulation desk, alphabetize and file in public catalog
No
File card in shelf list by book number
No
Send to original cataloging to determine entry notes, subject headings, added entries, etc.
Search Library of Congress union catalog
Yes
Type up card set with call number
Underline first letter of main entry, write call number on back of title page and indicate special destinations
Send book to marking room with new book list slip
Once a month make up new book list using slips
Xerox card set and type subject headings and added entries (cross reference if needed)

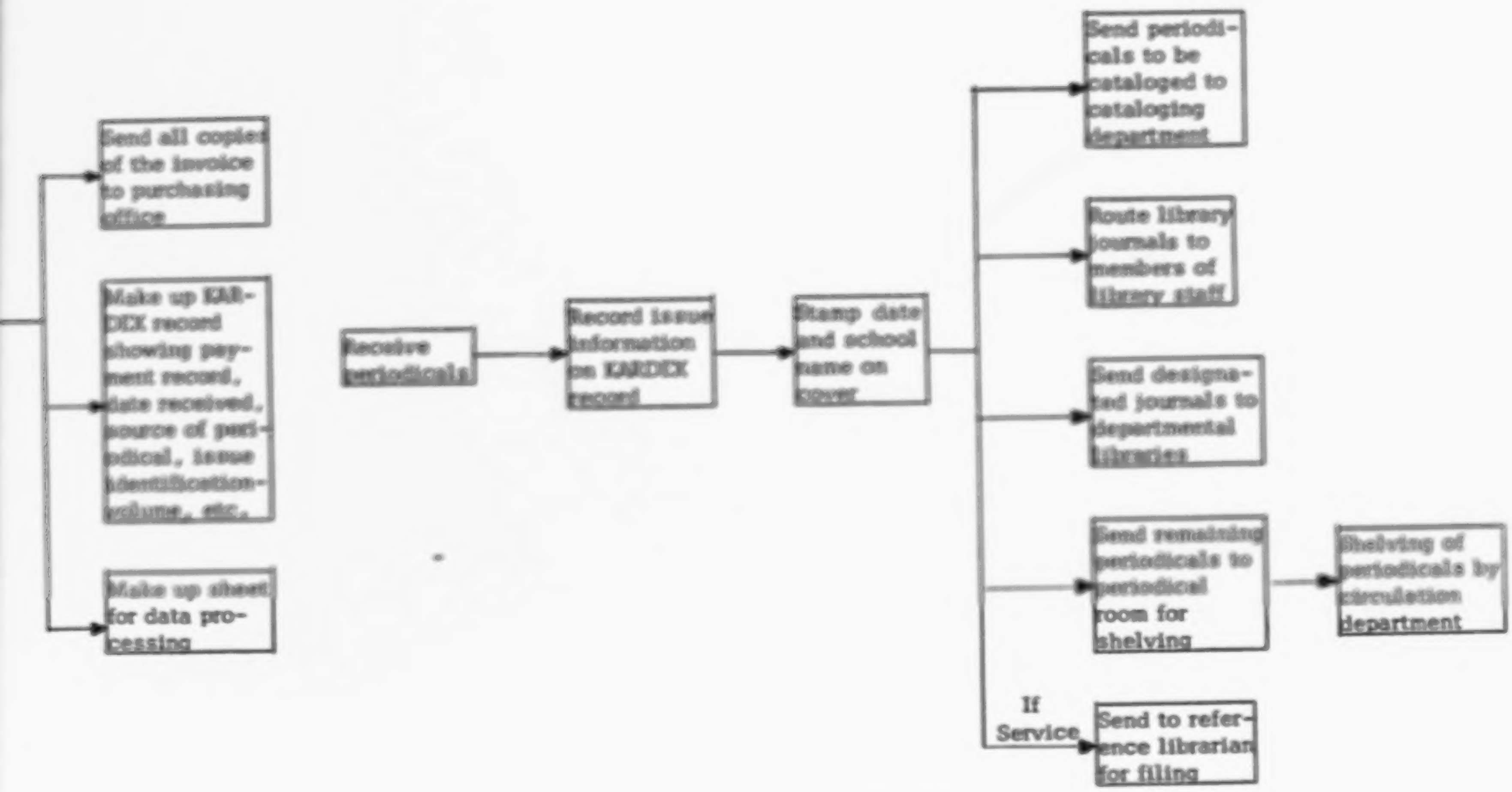
Cataloging: Separates, New Edition Replacement Books, New Serials and New Continuations

Cataloging: Identical Replacement Books, Second Copies, Old Serials and Old Continuations


Receive replacement books and 2nd copies
Different from original copy - go through regular cataloging procedure
Identical to original copy
Check public catalog to determine call number
Record 2nd copy on shelf list card
Receive continuations and old serials
Check public catalog for call number of series
Record volume number, etc. on shelf list
Underline first letter of main entry, write call number on back of title page, indicate special destinations and write copy number or volume number
Send book to marking room, indicate document is a 2nd copy, continuation or serial

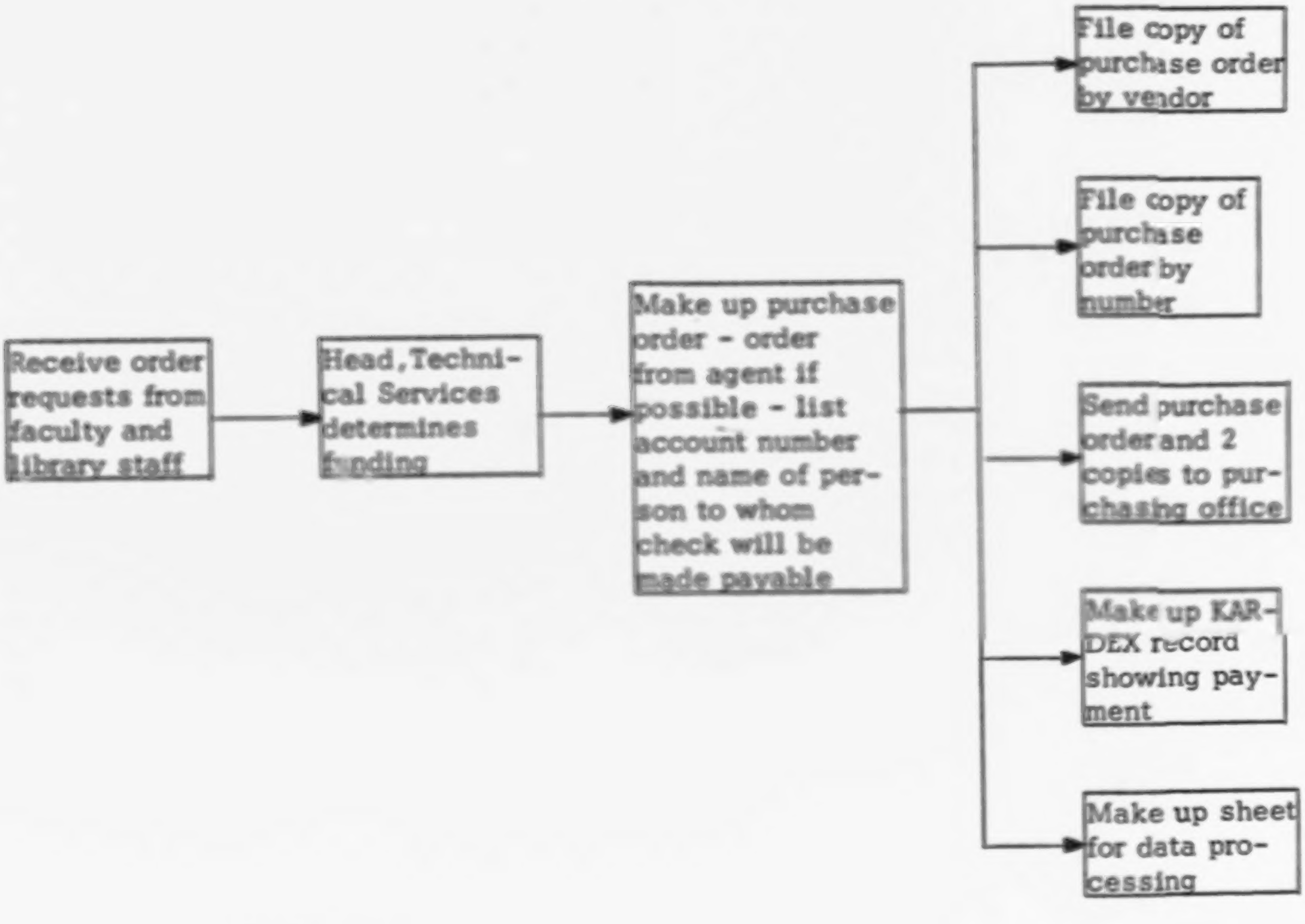
Serials: Ordering and Receiving New Periodicals and Receiving Procedure for Old Periodicals

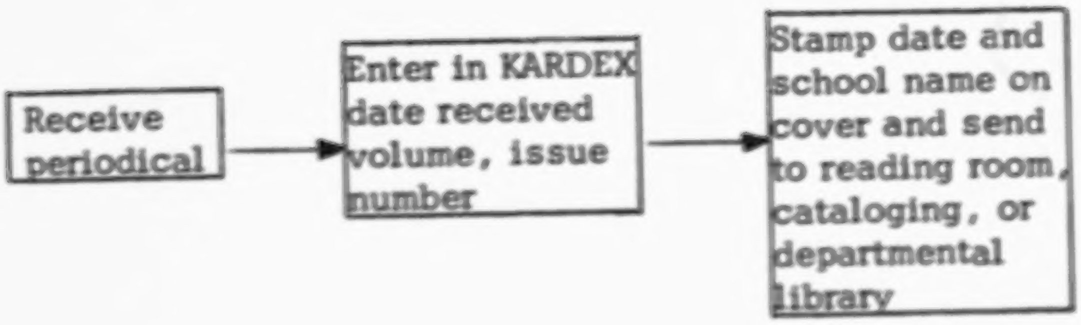

Receive order requests from faculty and library staff
Head, Technical Services determines funding
Make up purchase order - order from agent if possible
File copy of purchase order by number
Send purchase order and 2 copies to purchasing office
File copy of purchase order by vendors name
Receive invoice
Stamp invoice with account number


Send all copies of the invoice to purchasing office
Make up KARDEX record showing payment record, date received, source of periodical, issue identification-volume, etc.
Make up sheet for data processing
Receive periodicals
Record issue information on KARDEX record
Stamp date and school name on cover
Send periodicals to be cataloged to cataloging department
Route library journals to members of library staff
Send designated journals to departmental libraries
Send remaining periodicals to periodical room for shelving
Shelving of periodicals by circulation department
If Service
Send to reference librarian for filing

Serials: Ordering and Receiving New Periodicals and Receiving Procedure for Old Periodicals

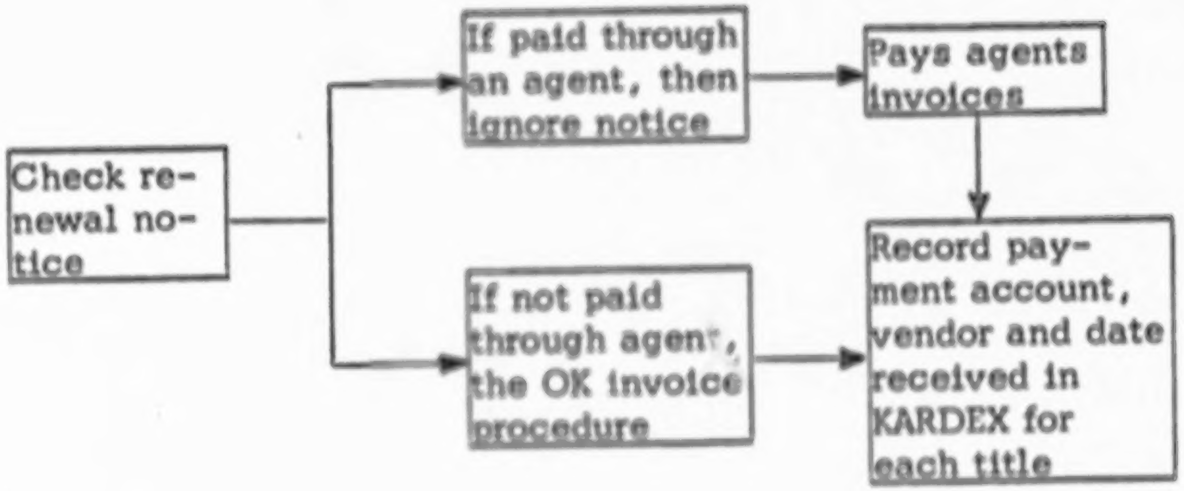
Serials: Prepaid Periodicals Subscriptions


Receive order requests from faculty and library staff
Head, Technical Services determines funding
Make up purchase order - order from agent if possible - list account number and name of person to whom check will be made payable
File copy of purchase order by vendor
File copy of purchase order by number
Send purchase order and 2 copies to purchasing office
Make up KARDEX record showing payment
Make up sheet for data processing

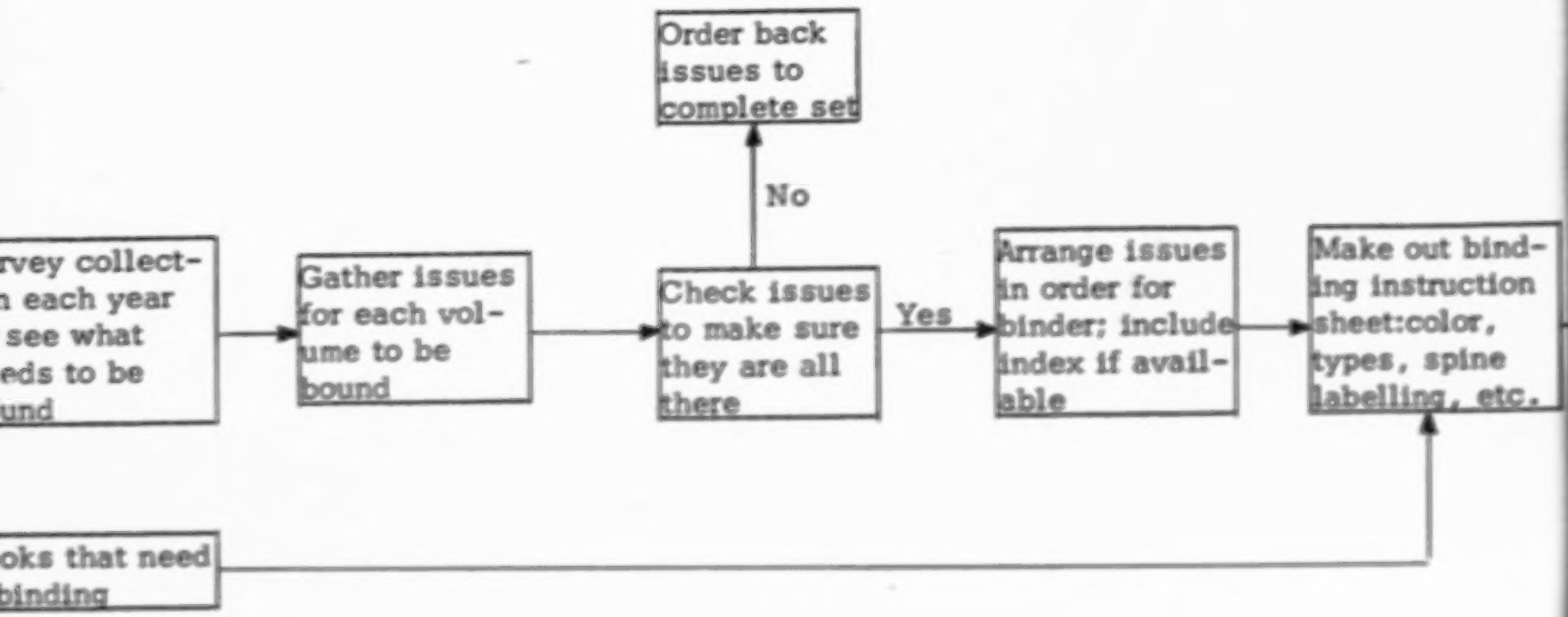

Receive periodical
Enter in KARDEX date received volume, issue number
Stamp date and school name on cover and send to reading room, cataloging, or departmental library

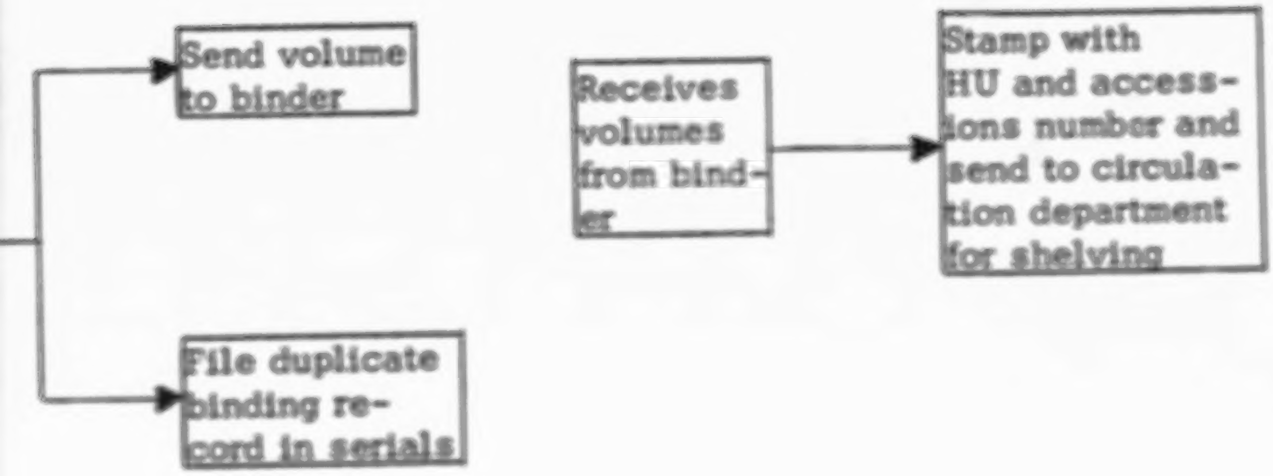
Serials: Prepaid Periodicals Subscriptions

Serials: Renewal Procedure


Check renewal notice
If paid through an agent, then ignore notice
If not paid through agent, the OK invoice procedure
Pays agents invoices
Record payment account, vendor and date received in KARDEX for each title

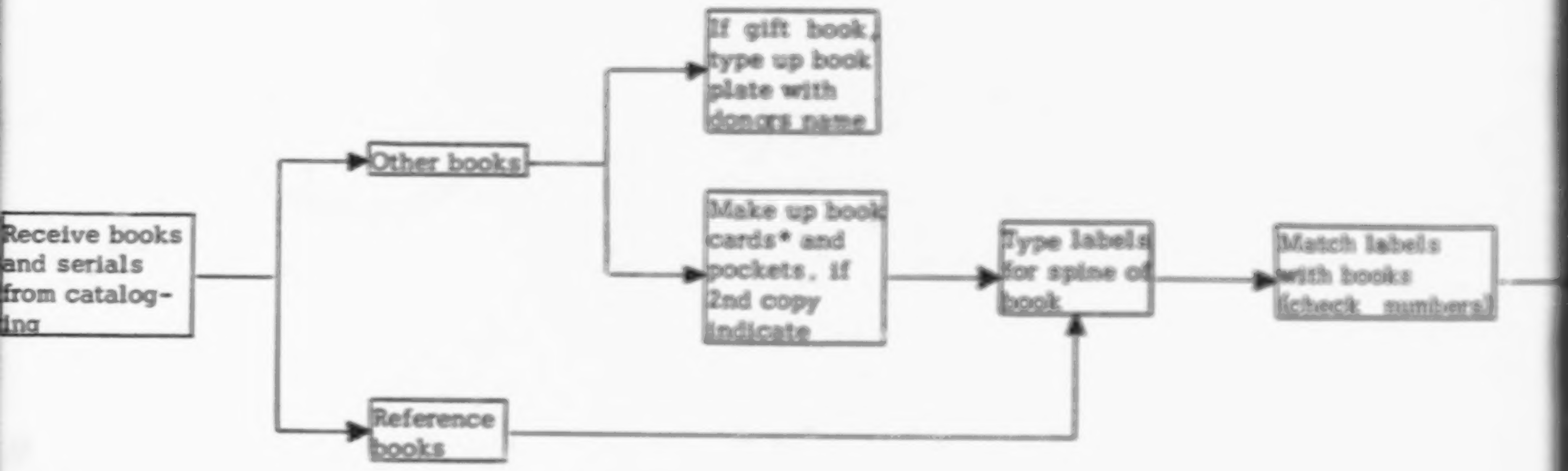
Serials: Binding Periodicals and Old Books


rvey collect-
n each year
see what
eds to be
und
Gather issues for each volume to be bound
Check issues to make sure they are all there
No
Order back issues to complete set
Yes
Arrange issues in order for binder; include index if available
Make out binding instruction sheet:color, types, spine labelling, etc.
oks that need
binding

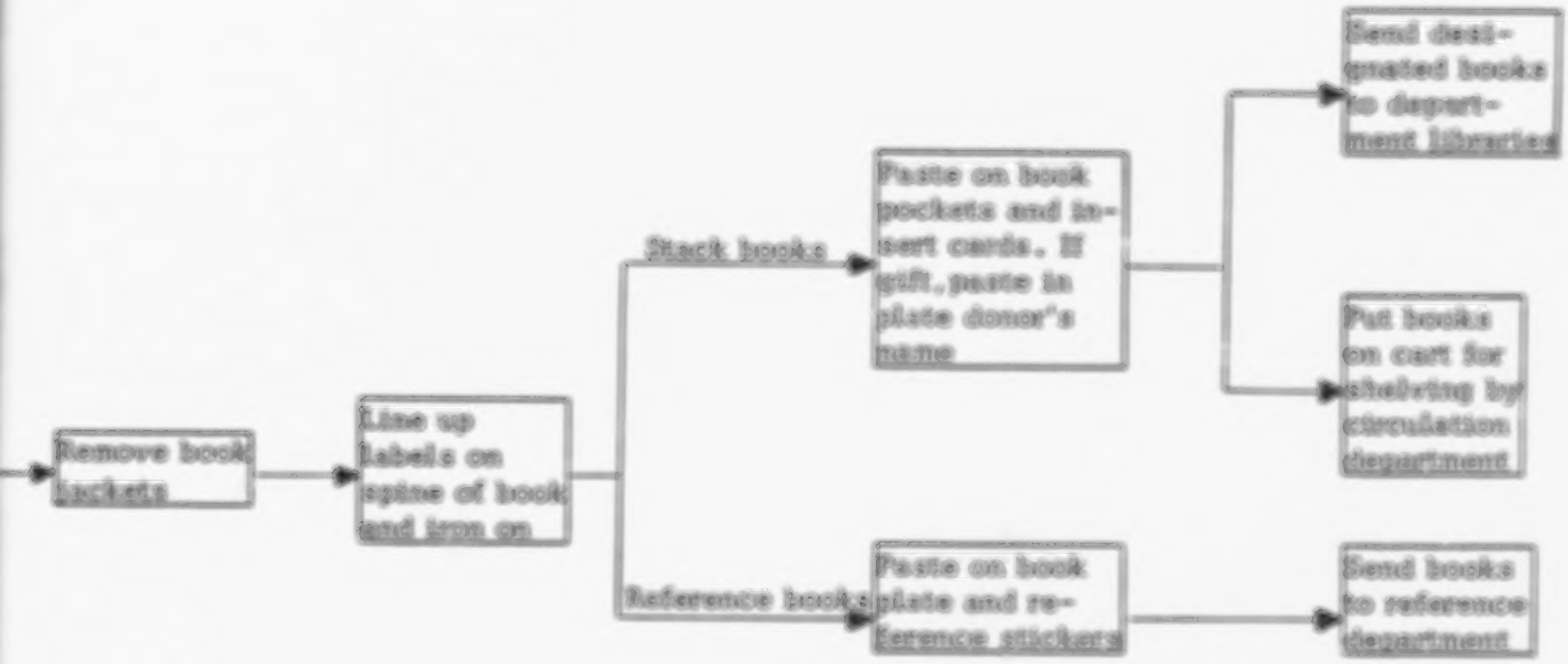

Send volume to binder
File duplicate binding record in serials
Receives volumes from binder
Stamp with HU and accessions number and send to circulation department for shelving

Serials: Binding Periodicals and Old Books

Marking


Receive books and serials from catalog-ing
Other books
Reference books
If gift book, type up book plate with donors name
Make up book cards* and pockets, if 2nd copy indicate
Type labels for spine of book
Match labels with books (check numbers)

* If childrens book, make up blue-gree book card.


Remove book jackets
Line up labels on spine of book and iron on
Stack books
Paste on book pockets and insert cards. If gift, paste in plate donor's name
Send designated books to department libraries
Put books on cart for shelving by circulation department
Reference books
Paste on book plate and reference stickers
Send books to reference department

Marking

APPENDIX B

The Hamline Users

The Faculty

Discussions were held with 51 faculty members on topic areas related to their professional activities, their needs for informational materials and material selection aids and the procedures they use for locating and retrieving potentially relevant materials. This appendix presents a summary of the results of these discussions.

The three general categories of professional activity engaged in by the Hamline faculty include (1) teaching, (2) personal professional growth - research, writing papers, consulting, and (3) administrative - committee assignments. Table B-1 shows the mean proportion of time spent on each of these activities by faculty members in the Social Sciences, Natural Sciences, and Fine Arts and Humanities. Overall the instructional activities take the largest percentage of time (74%) followed by personal/professional growth requiring 17% and administrative activities requiring nine percent.

Fifty-one types of informational materials were identified by faculty members as being required in the performance of their professional activities (see Table B-2). Of these 51 types of material seven were mentioned by faculty members in all three academic divisions and 12 were mentioned by faculty members in two divisions. The 18 faculty members interviewed in the Fine Arts and Humanities Division identified 39 types of materials, while those representing the Natural Sciences and Social Sciences Divisions identified 22 and 20 types, respectively.

TABLE B-1

Categories of Professional Activities and Percentage of Total Working Time Spent in Each Category

		Teaching	Personal/ Professional	Administrative
Social Sciences	Range Mean	50%-100% 77%	0-40% 14%	0-40% 9%
Natural Sciences	Range Mean	45%-100% 69%	0-90% 18%	0-50% 13%
Fine Arts & Humanities	Range Mean	50%-100% 74%	0-50% 19%	0-25% 7%

Teaching: The normal teaching load is 6-8 term courses per academic year. The percentages estimated above include time spent in preparation.

Personal/Professional: This category includes the following types of activities:

- Conducting research project
- Writing papers
- Presenting papers at professional meetings or to local groups
- Working on Ph.D.
- Consulting

Administrative: This category includes:

- Activities associated with the functioning of a department (this is primarily the chairman's responsibility)
- Committee assignments

TABLE B-2

Materials Needed

	Social Sciences*	Natural Sciences*	Fine Arts & Humanities*	Total
Books				
Textbooks	8 (50%)	10 (71%)	8 (44%)	26 (54%)
Teaching Methods	4 (25%)	6 (43%)	2 (11%)	12 (25%)
Reference Books	1 (6%)	4 (29%)	4 (22%)	9 (19%)
Books on Specialized Areas	2 (13%)		5 (28%)	7 (15%)
Secondary Source Books		1 (7%)		1 (2%)
Technical Books			1 (6%)	1 (2%)
Foreign Dictionaries			1 (6%)	1 (2%)
Foreign Conversational Material			1 (6%)	1 (2%)
Biographies	2 (13%)		3 (17%)	5 (10%)
Novels			6 (33%)	6 (13%)
Classics			1 (6%)	1 (2%)
Books Composed of a Collection				
Contemporary Poetry			3 (17%)	3 (6%)
Drama			2 (11%)	2 (4%)
Complete Works of Various Artists, Philosophers			3 (17%)	3 (6%)
Symposia Proceedings	1 (6%)	3 (21%)		4 (8%)
Anthologies			1 (6%)	1 (2%)
Critical Reviews		1 (7%)	4 (22%)	5 (10%)
Professional Reviews			1 (6%)	1 (2%)
Laboratory Manuals		3 (21%)		3 (6%)
Curriculum Materials (for teaching student)	1 (6%)	2 (14%)	1 (6%)	4 (8%)
Case Study Books	1 (6%)			1 (2%)
Manuscript Census	1 (6%)			1 (2%)
Reports				
Pamphlets			2 (11%)	2 (4%)
U. S. Government	4 (25%)			4 (8%)
United Nations	1 (6%)			1 (2%)
Other Colleges & Universities	2 (13%)	1 (7%)	1 (6%)	4 (8%)
Foreign Government Reports		1 (7%)	1 (6%)	2 (4%)
Conference Reports		1 (7%)		1 (2%)
Congressional Subcommittee Reports			1 (6%)	1 (2%)
Programmed Instruction Text		2 (14%)		2 (4%)

*16 Social Scientists
14 Natural Scientists
18 Fine Arts and Humanities

continued --

TABLE B-2 (Cont.)

Materials Needed: continued

	Social Sciences*	Natural Sciences*	Fine Arts & Humanities*	Total
Periodicals				
Journals	16(100%)	13 (93%)	16 (89%)	45 (94%)
Theoretical			1 (6%)	1 (2%)
Critical Review		1 (7%)	4 (22%)	5 (10%)
Historical Periodicals			2 (11%)	2 (4%)
Current Awareness Periodicals	4 (25%)		1 (6%)	5 (10%)
Journal Reprints	1 (6%)			1 (2%)
Trade Magazines		1 (7%)		1 (2%)
Newspapers (U.S. & Foreign)	3 (19%)		5 (28%)	8 (17%)
Data Compilations		2 (14%)		2 (4%)
Microfilm (Dissertations)		1 (7%)	2 (11%)	3 (6%)
Photocopies			1 (6%)	1 (2%)
Facsimile Material			2 (11%)	2 (4%)
Movies	2 (13%)	1 (7%)	3 (17%)	6 (13%)
Tapes			2 (11%)	2 (4%)
Recordings			1 (6%)	1 (2%)
Music Scores			1 (6%)	1 (2%)
Maps	1 (6%)	1 (7%)		2 (4%)
Paperbacks	1 (6%)		3 (17%)	4 (8%)
Computer	1 (6%)	1 (7%)		2 (4%)
Psychological & Achievement Testing Material		1 (7%)		1 (2%)
Art Reproductions			1 (6%)	1 (2%)
Information About New Composers & Schedule of Coming Events			1 (6%)	1 (2%)
Repertoire of Composition for Each Musical Instrument			1 (6%)	1 (2%)
Scripts			1 (6%)	1 (2%)

*16 Social Scientists
14 Natural Scientists
18 Fine Arts and Humanities

The selection aids scanned by the faculty in identifying potentially relevant informational materials are listed in Table B-3. Those aids mentioned by 1/3 or more of the interviewees include (1) journal table of contents (65%), (2) book reviews in professional journals (54%), (3) journal article citations (50%), (4) book advertisements from publishers (50%), (5) discussions with colleagues (35%), and (6) abstracting journals (33%). Overall, 35 material selection aids were identified in the interviews.

All of the faculty members interviewed found it necessary to use information sources external to Hamline University in order to satisfy their needs for materials and services. Table B-4 presents a list of the information sources identified. It can be seen from this list that 17 locations external to Hamline were mentioned; of these 17 information sources the two most frequently used are professional meetings and the University of Minnesota Library.

The procedures used by members of the faculty in obtaining required informational materials include (1) buying materials personally, (2) writing publishers for free copies, (3) using interlibrary loan, and (4) writing to or visiting other libraries.

Students

The students' requirements for informational materials are related to such tasks as reading assignments, term paper preparation, and conduct of honors or independent study projects. Of the 34 students included in the interview sample, 16 were engaged in independent study or honors projects and 18 were pursuing a regular course of study.

TABLE B-3

Material Selection Aids

	Social Sciences*	Natural Sciences*	Fine Arts & Humanities*	Total
Abstracting Journals	8 (50%)	7 (50%)	1 (6%)	16 (33%)
Book Reviews in Journals/ Periodicals	11 (69%)	7 (50%)	8 (44%)	26 (54%)
Book Notes in Journals/ Periodicals	1 (6%)			1 (2%)
Book Ads in Journals/Periodicals	2 (13%)		1 (6%)	3 (6%)
Book Ads from Publishers	8 (50%)	8 (57%)	8 (44%)	24 (50%)
Book Salesmen	4 (25%)	3 (21%)		7 (15%)
Choice Magazine	4 (25%)	3 (21%)	3 (17%)	10 (21%)
Card Catalog	2 (13%)		5 (28%)	7 (15%)
Special Bibliographies and Reading Lists	4 (25%)	2 (14%)	7 (39%)	13 (27%)
Reference Bibliographies		2 (14%)		2 (4%)
Paperback Books in Print		1 (7%)	1 (6%)	2 (4%)
Books in Print	1 (6%)		2 (11%)	3 (6%)
Hamline Library Accessions List (New Books)			1 (6%)	1 (2%)
Citations in Books	2 (13%)	1 (7%)	4 (22%)	7 (15%)
Footnotes in Books			1 (6%)	1 (2%)
Journal Table of Contents	10 (63%)	9 (64%)	12 (67%)	31 (65%)
Journal Article Citations	10 (63%)	6 (43%)	8 (44%)	24 (50%)
Readers Guide	2 (13%)		4 (22%)	6 (13%)
Colleagues	4 (25%)	7 (50%)	6 (33%)	17 (35%)
Special Meetings/Conventions	2 (13%)	3 (21%)	5 (28%)	10 (21%)
Reference Librarian		1 (7%)	2 (11%)	3 (6%)
Student Reports	2 (13%)		1 (6%)	3 (6%)
Newsletters from Professional Societies	1 (6%)	1 (7%)		2 (4%)
New York Review of Books	1 (6%)		1 (6%)	2 (4%)
Indexes (e.g., International Index)	5 (31%)	1 (7%)	2 (11%)	8 (17%)
Department Card Catalog	1 (6%)			1 (2%)
Book Stands at Conventions	1 (6%)			1 (2%)
Public Affairs Information Service	1 (6%)			1 (2%)
Book Review Digest	1 (6%)			1 (2%)
Personal Catalog	1 (6%)			1 (2%)
Bio Research Topics	1 (6%)	1 (7%)		2 (4%)
Books Table of Contents		1 (7%)		1 (2%)
Brochures & Catalogs for Bio Instruments		2 (14%)		2 (4%)
Scholarly Books in America			1 (6%)	1 (2%)
Guides to Philosophy Books			1 (6%)	1 (2%)

*16 Social Scientists
14 Natural Scientists
18 Fine Arts and Humanities

TABLE B-4

Places Where Desired Materials Have Been Obtained

Location	% of Faculty Members Using Source
Hamline University	
- Personal collections	100
- Colleagues collections	15
- Departmental library	27
- Main library	19
- Book store	4
Colleges in Twin Cities	
- University of Minnesota Library	50
- Bethel College Library	2
- St. Thomas Library	6
- St. Paul Bible College Library	2
- St. Catherines Library	2
- Macalester College Library	6
Other Libraries in Twin Cities	
- St. Paul Public Library	10
- Minneapolis Public Library	2
- Hill Reference Library	21
- Minnesota Historical Society	6
- Pillsbury Company	2
- Commerce Library (Minneapolis)	2
- State agencies	
. Department of Education	2
. Department of Taxation	2
. Law library	2
- Perrines Book Store	4
Information Sources Outside Twin Cities	
- University Microfilms, Ann Arbor	2
- University of Chicago	2
- Professional meetings	60

Size and Character of Personal Collections

		Social Science	Physical Science	Fine Arts and Humanities
Books:	Range:	250-9,000	250-550	200-3,000
	Mean:	1,668	366	1,043
Journals:	Range:	2-25	1-8	2-8
	Mean:	8.5	3.6	4.2

It can be seen from Table B-5 that the students engaged in independent study projects use a much wider range of material selection aids than the regular students. That is, the regular student relies primarily on the card catalog and the readers guide to identify and select relevant material while the honors/independent study student uses several sources including the card catalog, the abstract journals, special bibliographies, and the reference librarian. It is of interest to note that only two of the 34 students interviewed had ever made use of the reference services provided by the library.

Table B-6 provides a list of the locations or information sources used by the Hamline students. Both groups of students interviewed indicated the need to use a number of libraries in the Twin Cities to satisfy their needs for materials. In addition to local information sources, many of the students working on honors and independent study projects found it necessary to write to or visit libraries in other parts of the country.

TABLE B-5

Aids for Selecting Potentially Relevant Material

Aid	% Honors/ Independent Study Students*	% Regular Students**
Guidance by professor	56	
Card catalog	44	72
Abstracting journals	31	
Journal article citations	31	
Bibliographies in books	31	
Indexes	25	33
Special bibliographies	25	28
Journal table of contents	13	17
Standard texts	13	
Reference librarian	13	
Union list of periodicals	6	
Readers guide	6	44
References given in class	6	6
Course syllabus	6	
Collections of readings	6	
Reviews	6	

* Sixteen honors independent study students interviewed.

** Eighteen regular students (juniors and seniors) interviewed.

TABLE B-6

Location of Materials

Location	% Honors/ Independent Study Students	% Regular Students
Hamline University		
- Professors' personal collection	38	39
- Department library	13	33
- Main library	56	72
- Bookstore	13	6
Local Libraries		
- St. Paul Public Library	31	61
- Minneapolis Public Library	13	39
- Hill Reference Library	44	33
- Minnesota Historical Society	13	
- University of Minnesota Library	38	11
- Luther Theological Seminary Library	6	11
- St. Thomas Library	6	
- Bethel College Library	6	
- Macalester College Library		6
- St. Paul Bible College Library		6
Libraries in other parts of the country		
- Syracuse University Library	6	
- Cornell University Library	6	
- Iowa State University Library	6	
- Field Museum in Chicago	6	
- Art Institute in Chicago	6	
- United Nations	6	
- Frazer Library	6	
Personal collections of colleagues at other schools	13	
Foreign embassies	6	
Newspaper publishers	6	

General Comments Made by Faculty Members

Departmental Libraries

1. Departmental libraries in some form are necessary - need laboratory materials near or in laboratory.

2. On a liberal arts campus all books/periodicals should be kept in a central location -

- Organize according to present system
- Organize so that materials for each academic division are kept together - physically divide library into four sections
- Books and periodicals for each department should be kept together in one location
- There should be an audio/visual facility in central library, e.g., a music listening room

If departmental libraries are to function adequately they should have a staff and they should be open in the evenings. In addition, it should be possible to check books out for specified periods of time. Departmental libraries currently provide a place for students to study during the day (there are very few places on campus where students can study).

Book Budgets and Book Ordering Policy

1. Not enough money is available for buying books.

2. Would like to know what criteria are for ordering books/ allocating book budgets to departments.

3. Need a better procedure for obtaining out-of-print books.

4. Should be a better system of feedback - would like to know (1) if orders are filled and (2) when books are actually received.

- If library sent around cards when books were ordered then cards could be used for personal file.

5. Problem: faculty members order according to their special interests - thus, the entire discipline may be inadequately covered.

6. University should supply faculty members with small amounts of money to build up their personal collections.

7. New books should be put on display for one to two weeks so that faculty and students can be aware of (browse through) new books as they are acquired.

8. Speed up processing of new materials so that they are available for use sooner.

9. Develop procedures for ordering -

   - Music score
   - Scripts
   - Childrens books
   - Etc.

   Provide faculty members with information concerning these procedures.

Collections

1. Should have multiple copies of books - hard to assign to class for reading when only one copy is available.

2. Currently the collection is weak in supporting research requirements. It serves only to introduce students to topics.

3. Collection is quite weak in most academic areas (departments).

   - Books
     - Novels (modern)
     - Classics
     - Sociology

    - Anthropology
    - Mathematics
    - Computer programming
    - Chemistry
    - Music
    - Adequate for: criticism and secondary sources in American literature

- Periodicals
    - Newspapers
    - Back issues of journals
    - New journals
    - Need more reviews, monographs, symposia

4. Collection needs to be weeded - too many old, out-of-date volumes.

Services

1. Services at the library have been very helpful to several faculty members. Library staff is helpful. Xerox useful.

2. Services of library should be spelled out so students and faculty may be aware of how to use the system.

3. Interlibrary loan procedures need to be improved - presently they appear to be very complex - hard to get material this way.

4. Hours should be extended.
    - Open as much as possible
    - Open 24 hours
    - Open during vacation periods

5. Periodicals should circulate - should be able to keep them out for longer.

6. Should have more audio/visual equipment - need more microfilm readers.

Other Issues

1. Library - facilities

   - Too crowded and uncomfortable. Should not use fluorescent lights.
   - Stacks are too dark - hard for browsing.
   - Need more effective accounting of books - several missing or mis-shelved.
   - Periodicals should be more conveniently located.
   - Audio-visual set up should be improved:

     - Film collection
     - Records
     - Tapes
     - Slides, etc.

   - Paperback books should be bound.
   - Reserve books should be more accessible.
   - Library is understaffed.
   - In new library, need a variety of seating arrangements - some people like to be surrounded by books; others like big, spacious rooms.

2. Need a library orientation program - neither students nor faculty know how to use the library.

   - Could use programmed tapes to teach people how to use the library - make tapes for different kinds of reference material - have students listen to tape and go through an example.

   - All departments on campus should take the responsibility of teaching students how to search the literature in their field. (Each department should have laboratory courses: teach method not just content.)

   - If materials are not easily accessible or student does not know where to look them up he will probably not use them.

3. College bookstore should stock a greater variety of paperbacks. Students could buy cheaply and easily.

   - More and more having students buy paperbacks for class rather than use library.

4. Put back issues of journals on microfilm. This will create money for purchasing new periodicals.

5. Would like to know of information services that are available - locally, around the country.

- Set up common catalogs across cooperative libraries.
- Identify all potential information sources (national, regional, local) for research projects.
- Need quick way of knowing what is available in Twin Cities.

6. Would like to see a computer based search system (on-line).

- Schools in Minnesota could have terminals which hook into computer system at the university.

7. Make use of a system like WATS.

General Comments Made by Students

Library Collection

1. The collection was considered to be adequate in the following areas:

- For books
    - Anthropology
    - Religion
    - Political science before 1950
- For periodicals
    - International relations

2. The collections have proved to be inadequate for doing any "in depth" research, very weak in specialized areas.

3. The collection is too general; it provides only an overview.

4. The collection is not systematic - big gaps exist - particularly in sociology, psychology, and political science.

5. The collection was considered to be inadequate or outdated in the following areas:

- For books
    - Biology
    - German
    - Social sciences: sociology, political science, international affairs, etc.
    - Basic classical documents in English
    - Physics
    - American studies
    - Health
    - Physics
    - Music
- For periodicals
    - Back issues (social sciences)
    - News magazines and newspapers
    - Chemistry journals

- Education journals
- Philosophy journals

6. There are not enough copies of books to meet the course requirements.

7. Periodicals should be listed and organized on the shelves by subject.

8. Historical documents should be provided on microfilm.

Circulation Policy

1. The current circulation policy has proved to be unsatisfactory.
   - The recall procedure is not effective.
   - It is very difficult to obtain a book when another student has it checked out.
   - Mathematics books should be checked out for the entire course (not just a term).

2. Students should be allowed to check out bound periodicals over night.

Library Hours

1. There is a need for a 24-hour study room.

2. The main library should stay open later during exam periods and on Saturdays and be open earlier on Sundays.

3. The main library should be open during the holidays.

4. The departmental libraries should be kept open in the evenings.

Library Facilities

1. The library facilities are inadequate.
    - Too crowded.
    - Very noisy (used as a place to meet and socialize rather than to work).
    - Ventilation is poor - the library is either too cold or too hot.
    - No comfortable place to read.
    - Lighting in the stacks is poor.
    - Rooms are too large - this makes it difficulty to study.
    - Tables too high and chairs too small.
2. Suggestions for improving library facilities.
    - Separate cubicles or study booths.
    - Seminar rooms for students who wish to discuss and use library materials.
    - Break up large study areas by putting stacks between tables.
    - Comfortable chairs for reading.
    - Soundproofing and carpets to cut down the noise.
    - Language laboratory with tapes should be included in the library.

Services

1. Six of the 34 students interviewed had used the services of the reference librarian.

2. The Xerox machine had been used by six of the 34 students interviewed.
    - Some would have liked to use the Xerox but felt that it was too expensive.

3. No other services were mentioned.

4. Most of the students were unaware of the interlibrary loan procedure.

General Comments on Library Policies

1. Open stacks are a good idea.

2. The policy of open stacks permits the student to walk out with books.

    - Many books are stolen; there should be a book checker to make sure books are not taken from the library without being checked out at the circulation desk.

3. The departmental libraries should be continued.

4. On a small campus like Hamline, all books should be kept in a central location. (This attitude was held by students in Fine Arts and Humanities).

5. The cards in the catalog should be marked when books are put on reserve.

6. The cooperative program (six colleges in Twin Cities) does not provide much additional help. It is possible to obtain all needed materials from the Hill Reference Library.

APPENDIX C

EXTERNAL INFORMATION SOURCES AND SERVICES USED BY THE HAMLINE LIBRARY

EXTERNAL SOURCES AND SERVICES SUMMARY

Information Services

Interlibrary Loan

Local Colleges and Universities

- Macalester College
- Bethel College and Seminary
- St. Thomas
- St. Catherine
- Augsburg
- Concordia
- St. Paul Bible College
- United Theological Seminary
- Luther Theological Seminary

Public and State Facilities

- Ramsey County Medical Society Library
- Minnesota Historical Society (Exchanges publications with Hamline - no interlibrary loan set-up)
- Minneapolis Public Library

Local Industry

- 3M - Technical Library; Benz Technical Library (chemistry); Business Library; IPP Library (energy conversion, thermoelectricity); Engineering Library; Tape Technical Library (rubber, plastics, and adhesives); 209 Library; 235 Library
- Honeywell - Ordnance Engineering Library; Engineering Library
- Pillsbury - Commercial Research Laboratory Library; Laboratory Library (chemistry, food sciences collection)
- General Mills - General Office Library (business, marketing, etc.)
- Minneapolis Gas Company

Interlibrary Loan (continued)

Colleges and Universities in Other Areas of the Country

- Carlton College Library (humanities and social sciences)
- University of Southern California (undergraduate collection)
- University of Michigan
- Harvard College Library
- Princeton University Library
- University of Wisconsin Library
- University of Chicago Library
- University of Denver Library
- St. John's University Library
- University of Texas Library
- University of Iowa Libraries
- University of Washington Library
- Columbia University Library
- University of California Library

Other Information Sources

- State Historical Society of Wisconsin
- Linda Hall Library (science and technology reference library)
- Center for Research Libraries (acquire infrequently used research materials)

Check-Out Books

Local Colleges and Universities

Macalester College

Bethel College and Seminary

St. Thomas

St. Catherine

Augsburg (need library card, cost $5.00 per year)

Concordia

St. Paul Bible College (with special permission)

United Theological Seminary (to students attending other seminaries in Twin Cities)

Luther Theological Seminary (to students attending other seminaries in Twin Cities)

University of Minnesota (for registered students)

Public and State Facilities

Minneapolis Public Library (cost to out-of-town students)

St. Paul Public Library (cost to out-of-town users)

Local Industry

3M to employees

3M Tape Technical Library (rubber, plastics, and adhesives) -borrow with special permission

Honeywell Ordnance Engineering Library (special permission); Engineering Library (special permission)

General Mills General Office Library (business, marketing, etc.) -checkout with special permission

Minneapolis Gas Company

Reference Service

Local Colleges and Universities

- Macalester College (phone, in person)
- Bethel College and Seminary
- St. Thomas
- St. Catherine
- Augsburg
- Concordia
- St. Paul Bible College
- United Theological Seminary
- Luther Theological Seminary
- University of Minnesota Libraries

Public and State Facilities

- Ramsey County Medical Society Library
- State Law Library (Minnesota)
- Hill Reference Library
- Minnesota Historical Society
- Minneapolis Public Library
- St. Paul Public Library

Local Industry

- 3M Technical Library; Abrasive Library; Benz Technical Library (chemistry); Tape Technical Library (rubber, plastics, and adhesives); 209 Library; 235 Library
- Honeywell - Ordnance Engineering Library; Engineering Library
- Pillsbury Company - Commercial Research Laboratory Library; Laboratory Library (chemistry, food sciences)
- General Mills - General Office Library (business, marketing, etc.); James Ford Bell Laboratory; East Hennepin Laboratory

Reference Service (continued)

Colleges and Universities in Other Areas of the Country

- Carlton College Library (humanities and social sciences)
- University of Southern California (undergraduate collection)
- University of Washington (social science reference desk)
- University of Iowa Library
- University of Denver Library
- University of Chicago Library (caller pays for phone call)
- University of Wisconsin Library
- Princeton University Library
- University of Michigan Library

Other Information Sources

- New York Public Library
- State Historical Society of Wisconsin
- Linda Hall Library (science and technology)

Xeroxing or Photocopy

Local Colleges and Universities

- Macalester
- Bethel College and Seminary
- St. Thomas
- St. Catherine
- Augsburg
- Concordia
- St. Paul Bible College
- United Theological Seminary
- Luther Theological Seminary
- University of Minnesota

Public and State Facilities

- Ramsey County Medical Society
- Hill Reference Library
- Minnesota Historical Society
- Minneapolis Public Library
- St. Paul Public Library

Local Industry

- 3M Technical Library; Technical Communications Center; Abrasive Library; Benz Technical Library (chemistry); Business Library; IPP Library (energy conversion, thermoelectricity); Engineering Library; Tape Technical Library (rubber, plastics, and adhesives); 209 Library; 235 Library
- Honeywell - Engineering Library
- Pillsbury Company - Commercial Research Laboratory Library; Laboratory Library (chemistry, food sciences)
- General Mills - General Office Library (business, marketing, etc.); James Ford Bell Library; East Hennepin Laboratory
- Minneapolis Gas Company

Xerox or Photocopy (continued)

Colleges and Universities in Other Areas of the Country

- Carlton College Library (humanities and social sciences)
- University of Southern California (undergraduate collection)
- University of Michigan Library
- Harvard College Library
- Princeton University Library
- University of Wisconsin Library
- University of Chicago Library
- University of Denver Library
- St. John's University Library
- University of Texas Library
- University of Iowa Libraries
- University of Washington Library
- Columbia University Library
- University of California Library

Other Information Sources

- New York Public Library
- State Historical Society of Wisconsin
- Linda Hall Library (science and technology)
- Center for Research Libraries
- University Microfilm Inc.

Translation Service

Local Industry

- 3M Technical Library; Abrasive Library
- Honeywell - Engineering Library
- General Mills - James Ford Bell Laboratory and East Hennepin Laboratory

Literature Searches and Bibliographies

Local Industry

3M Technical Library; Technical Communications Center; Abrasive Library; Benz Technical Library (chemistry); Business Library; Engineering Library; Tape Technical Library (rubber, plastics, and adhesives); 209 Library

Honeywell - Ordnance Engineering Library (usually just for employees), Engineering Library

Pillsbury Company - Laboratory Library (chemistry, food sciences) (index searches)

Minneapolis Gas Companies (searches conducted and bibliographies compiled for company employees - these are kept on file for public use)

Other Information Sources

University Microfilms - publishes bibliographies, catalogs to their reprints and catalog cards

Magnetic Tape Searches

Local Industry

3M Technical Library (chemical patents)

3M Technical Communications Center (chemistry titles)

SDI

Local Industry

3M Technical Communications Center

3M Tape Technical Library

Subject Fields Covered
(Collection Strengths)

Local Information Sources and Services

Colleges and Universities

Augsburg - liberal arts collection - no specific strengths listed.
Bethel College and Seminary - religion and theology.
Concordia College - humanities.
Luther Theological Seminary - religion and theology.
Macalester - social sciences, arts and physics.
St. Catherine - general liberal arts collection - with a special collection on women.
St. Paul Bible College - religious education and theology.
St. Thomas - science, business, education, theology (catholicism) and Irish language and literature.
United Theological Seminary - religion and theology.
University of Minnesota - research collections; specialized and departmental collections.

Public and State Facilities

Hill Reference Library - chemistry, economics, technology, railroads.
Minneapolis Public Library - public library collection.
Minnesota Historical Society - historical materials on upper midwest, particularly Minnesota, genealogical collections - 6th largest in the country; state historical society journals from every state.
Ramsey County Medical Society Library - medical collections with emphasis on clinical medicine and history of medicine.
St. Paul Public Library - public library collection.
State Law Library - laws of all the states, reports and digests from all the states and several periodicals approving in the index to legal periodicals (225,000 volumes).

Local Industry

3M Libraries

- Technical library - basic science and technology, especially chemistry, physics, electronics, and biomedicine.
- Technical communications center - 3M technical reports, technical awareness items, and patents on microfilm aperture cards.
- Abrasive library - abrasive and abrading techniques, minerals, gemmology, metallurgy.
- Benz Technical Library - chemistry.
- Business Library - marketing, management, statistics, salesmanship.
- DM and S Laboratory reading room - electrical insulation, apoxy resins.
- IPP Library - energy conversion and thermoelectricity.
- Reinforced Plastics Library - reinforced plastics.
- Engineering Library - engineering trade literature.
- Tape Technical Library - rubber, plastics, and adhesives.
- 209 Library - adhesives, paint, polymer chemistry, ceramics, textiles, photography.
- 235 Library - chemistry, physics, electronics, engineering, graphic sciences and optics.
- 3M Mertle Library - rare books on photography and photomechanics.

Honeywell, Inc. Libraries

- Ordnance Engineering Library - electronics, missiles, aerodynamics, mathematics, plastics, and management.
- Engineering Library - technical and industrial literature.

Pillsbury Company Libraries

- Commercial Research Laboratory Library - internal reports, government periodicals and publications, small collection of books on business, economics, and marketing.
- Laboratory Library - chemistry (food sciences) and internal reports.

General Mills, Inc. Libraries

- General Office Library - business, marketing, and government information.

- James Ford Bell and East Hennepin Laboratory Libraries - science and technology; patents, chemical catalogs, etc.

Minneapolis Gas Company Library

- Gas industry, chemistry, utilities management and personnel, marketing, finance, area development, data processing, home services and kitchen planning.

Information Sources in Other Areas

- University Microfilms - (materials available on microfilm or xerox copy), doctoral dissertations from 160 universities, 20,000 out-of-print titles, U.S. and foreign newspapers, early American periodicals, early English books and literary periodicals, Chinese periodicals, government documents on microfilm, etc.
- Linda Hall Library - science and technology reference library - general science, geology, astronomy, mathematics, physics, chemistry, biological sciences, psychology, applied medical sciences, technology and engineering, patents, agriculture, manufacturing.
- Center for Research Libraries - printed doctoral dissertations from foreign universities, U.S. university and college catalogs, course announcements and annual reports of president, collection strengths, treasurers and trustees, new scholarly periodicals issued in foreign countries, scholarly periodicals from foreign countries that are not adequately available, government documents and reports, etc.

Federal Services

Interlibrary loan

- GPO - to other government agencies depository libraries are required by law to make GPO publications available to the public.
- Library of Congress - loan service to other libraries and to members of congress.
- U.S. Office of Education - final reports of research available at 60 public libraries. Reports on utilization of communication media for educational purposes deposited in each state department of public instruction.
- Office of Education: Educational materials laboratory - U.S. and foreign materials.
- HEW - Gallaudet College.
- Welfare administration.
- Social Security Administration Library.
- Atomic Energy Commission
- Department of Agriculture: National Agriculture Library
- Department of Commerce: Bureau of Census.
- National Bureau of Standards.
- National Library of Medicine (HEW).
- NASA - free distribution of publications and technical briefs to educational institutions.
- Air Force: Air University; Office of Aerospace Research.
- Navy: Office of Naval Research.
- Army - Corps of Engineers (need-to-know); Army Mobility Command; Army Missile Command; Army Electronics Command; U.S. Army Cold Regions Research & Engineering Laboratory; Harry Diamond Laboratories; Army Materials Research Agency.

Reference Service

- Food & Drug Administration - specific inquiries answered if material is public information.
- Social Security Administration Library (Baltimore).
- Department of Agriculture: Information Office.
- Agricultural marketing Service: Agricultural Economic Division - supply and analyze statistical data and answer questions.
- National Bureau of Standards: data and reference services.
- Treasury Department: Coast Guard address inquiries to Public information Office, Coast Guard District Office; Bureau of Customs - address inquiries to chief chemist, U.S. Customs Laboratory.
- Air Force: Air Weather Service.
- Navy: Office of Naval Research.
- Army: Medical Service & Development Command; Army Electronics Command; Cold Regions Research & Engineering Laboratories.

Photoduplication

- GPO
- Library of Congress
- HEW: Gallaudet College
- Department of Agriculture: National Agriculture Library
- National Library of Medicine (HEW)
- Air Force - Office of Aerospace Research
- Army - Medical Research & Development Command; Corps of Engineers (need-to-know)
- Clearinghouse for Federal Scientific and Technical Information

Announcement of New Acquisitions/Publications

- GPO (Monthly Catalog - lists all publications of federal departments, bureaus, and agencies including congress.
- Clearinghouse for Federal Scientific and Technical Information (fast announcement service; USGRDR)

- Library of Congress sells catalog cards and proof slips.
- Social Security Administration Library.
- Atomic Energy Commission (publications and abstracts on patents).
- Department of Agriculture: Agriculture Research Service; Forest Service; Agricultural Marketing Service; Farmer Cooperative Service.
- Treasury Department: Coast Guard (announcement is through DDC & GPO).
- NASA - STAR & CSTAR; International Aerospace Abstracts; abstracts in meteorological and geoastrophysical areas.
- U.S. Air Force: Aeronautical Chart & Information Center; Project RAND; Operations Analysis Service (classified); Air Weather Service.
- U.S. Army: Medical Research & Development Command.

Literature Searches

- Library of Congress - Conventional retrospective bibliographies covering subject fields, languages and time periods as specified by requester (cost: $8/hr.).
- Welfare Administration (literature searches for HEW personnel).
- Office of Vocational Rehabilitation - bibliographic services for HEW personnel.
- Atomic Energy Commission ($6.60/hr.).
- National Bureau of Standards (bibliographic services).
- National Library of Medicine: Bibliographic searches, abstracting, MEDLARS (computer based storage and retrieval system).
- Veterans Administration (for staff members).
- NASA: Prepare special bibliographies on request.
- Air Force: Air Weather Service; Air University; Office of Aerospace Research.
- Navy: Office of Naval Research (literature searches and data compilations); Bureau of Naval Weapons.
- Army: Corps of Engineers (maybe for employees only); Army Materials Research Agency.

Translations

- GPO - listed in periodical publication with who to contact.
- National Institutes of Health - obtainable through Department of Commerce.
- Atomic Energy Commission.
- Department of Agriculture: National Agriculture Library.
- Department of Commerce: Bureau of Census; Patent Office.
- National Bureau of Standards.
- National Library of Medicine: Translations of Russian and Japanese literature in Excerpta Medica, translation of world literature (abstracts) in gerontology and geriatrics section of Excerpta Medica, translation of abstracts of Soviet literature in Biological Abstracts.
- NASA
- Air Force: Project RAND: Office of Aerospece Research.
- Army: Corps of Engineers; Army Mobility Command; Army Missile Command; Army Munitions Command; Cold Regions Research and Engineering Laboratory; Army Materials Research Agency.
- Navy: Office of Naval Research; Bureau of Ships; Bureau of Naval Weapons.

Other Services

- Public Health Service: Six centers which provide specialized data; one lab which provides specialized data and one clearinghouse which provides specialized data.
- Atomic Energy Commission: Twelve information centers on specialized areas.
- Department of Agriculture: six field office libraries; 3 branch libraries; Pesticides Information Center.
- Department of Agriculture: National Agriculture Library; bibliographic clearinghouse for USDA agencies; land-grant colleges, experimental stations, any firm working in biological or agricultural sciences.

- Agricultural Library Network - cooperative program between national agriculture library and libraries of land-grant institutions.
- Veterans Administration: maintains cancer registry (VA register all cases, other hospitals register a 20% sample).
- Federal Aviation Agency - field offices supply some information.
- Air Force - technical library open to qualified persons. (Aeronautical Chart and Information Center; Surgeon General; Air Weather Service).
- Air Force: Project Rand - 41 depository libraries.
- Navy: Bureau of Ships - access to library on need to know basis (also data centers).
- Army: Medical Research & Development Command (production and dissemination of audio-visual materials); Corps of Engineers - field offices give out publications.
- Library of Congress - alerts subscribers of recent developments in their subject fields (weekly or other periodic compilations).